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SIR ALMROTH WRIGHT'S PHYSIOLOGICAL METHOD FOR THE TREATMENT OF WOUND INFECTION APPLIED TO ABSCESSES.[1]

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As a pathologist, perhaps I should apologise for coming before you with a paper dealing with a surgical subject. The excuse I beg to offer lies in the fact that there appeared in the *British Medical Journal* of April 10, 1915, p. 625, and in the three successive numbers, an address by Col. Sir Almroth Wright, delivered before the Royal Society of Medicine on "Wound Infection."

That address, a masterpiece, such as only Sir Almroth's brain and his infinite predilection for technical intricacies could bring forth, recalled to my mind very forcibly the time which I had the good fortune to spend as a pupil in Sir Almroth's laboratory at St. Mary's Hospital some years ago.

This was in 1907, at the time when such papers of Sir Almroth's as "A Lecture on the Principles of Vaccine Therapy" (*Lancet*, August 17, 1907), "Studies in Therapeutic Immunization" (*Lancet*, November 2, 1907) appeared in print; the time when the excitement, as one might well call it, as regards the opsonic index and vaccine treatment was at its height.

Sir Almroth's teaching in those days was identical with that of the present day, as expressed in his recent paper. He was ever ready to impress on us the uselessness, indeed, the harmfulness, of the treatment of bacterial infection with antiseptics. His teaching was that no antiseptic application could possibly reach the bacteria infecting the skin, mucous membranes, or deeper tissues with such effect as to produce complete sterilization, and without a complete sterilization the residue of bacteria would invariably assume after a time of multiplication the former degree of danger.

On the other hand, Sir Almroth was ever of the opinion that the first line of defence against bacterial infection lay in the anti-bacterial power of the tissues themselves, and that the application of an antiseptic became absolutely harmful on account of the antagonism of such antiseptics towards these protective forces of the tissues, which were phagocytosis and the anti-bacterial power of the blood fluids.

His teaching thus lay in the direction of the preservation and stimulation of these protective forces; the first by avoiding anything detrimental to them, such as the application of antiseptics; the second by applying such means which would lead to an increased pouring out of the blood fluids.

We were thus instructed in all cases of suppurating sinuses, or opened abscesses, firstly to abstain from using any antiseptics, and secondly to introduce lint soaked in a solution of sodium citrate and sodium chloride, which was to stimulate the anti-bacterial power of the times. The results which we saw at St. Mary's were certainly convincing, and it led me, some years afterwards, to apply the same line of treatment to abscess cavities.

However, as I was not in general practice, I had no opportunities of employing the method to any extent, and only a few weeks ago, after having read Sir Almroth's latest paper, which embodies in every detail his former teaching, did it occur to me to put the idea again to the test. We did this at Sydney Hospital, and treated for some weeks every case of abscess that came to the casualty room on the lines indicated. Although no great number of cases passed through our hands, yet I felt justified from the results in publishing the method.

This is as follows: As much pus as possible is removed from the abscess cavity by aspiration; after this procedure the cavity is washed out by injection, followed by aspiration, with a saline solution, until fairly free from pus and débris. While some of the solution is still within the cavity the aspirating needle is removed. The after-treatment consists of hot fomentations until the surrounding inflammation has subsided, which will occur within 24 or 48 hours, according to the degree of inflammation.

The advantages of such a procedure over the recognized manner of surgical treatment of abscess cavities by incision and drainage are the following:—

(1) There being no incision and therefore no drainage, there is no after-treatment requiring daily attendance for purposes of dressing.
(2) There is no danger of secondary infection by contamination, as with an incised abscess while draining and healing by granulation.
(3) There is no scar left to mark the site.
(4) The operation is simple and requires no previous preparation nor getting together of dressing material.
(5) An occasional advantage is that this method will prevent incisions being made into tissues not containing pus, *e.g.*, hæmotoma and brawny swelling, since the aspiration needle will be the means of diagnosing the condition.

The method of procedure is as follows:—

We require a stout needle and a syringe of five or more c.cm. capacity. Any syringe will do; a trocar and canula will do, if the latter be connected up to the syringe by means of rubber tubing.

The saline solution used is a mixture of sodium citrate grs. iii. and sodium chloride grs. xxv. to the ounce of water. It is prepared by dissolving the powders in the required amount of boiling water. It is used when cooled.

The skin over the abscess is washed with soap and water, the point where the needle is to be in-

[1] Read at a meeting of the New South Wales Branch of the British Medical Association on August 13, 1915.

serted is sterilized with tincture of iodine. The site of insertion is immaterial, yet it may be advisable to insert from above, so that the free end of the needle comes to lie in the most dependent part of the cavity.

The needle is inserted while on the syringe; we then aspirate as much pus as possible, remove the syringe from the needle and eject the pus; the syringe is then filled with the saline solution, some of which is injected to the extent of slightly distending the cavity; it is then withdrawn into the syringe and ejected. This process of injecting and withdrawing is repeated until as much pus as possible, together with such débris and necrosed tissues as will come away, has been removed. In cases where the contents of the cavity are thick, and cannot readily be drawn into the syringe, it is advisable to begin by injecting some of the saline fluid, so as to dilute the contents. A small amount of the fluid is left in the cavity and the needle is withdrawn.

The patient is directed to apply hot fomentations several times during the day in the following manner:—

The water must be very hot. A piece of wool or lint is dipped into the water and is then held to the skin over the abscess. The water must be so hot as not to be tolerated for more than a second or two at a time. This process is continued for three to five minutes each time. There is to be no continuous fomentation; between each application a dry dressing will be applied. In many cases no dressing will be required.

It may be necessary to repeat the process of washing out on the second day; in most cases a single operation suffices.

The above method of hot fomentation is also based on Sir Almroth Wright's teaching. The physiological effect of a hot fomentation is the stimulation of a ready flow of lymph to the part. Such flow will only take place while the parts are hot. This period in the ordinary hospital methods of fomentation is of so short a duration that its physiological effect is almost nil; on the other hand, the action of the continuous hot fomentation converts the skin, as Wright puts it, "into a sopping, lymph-sodden blanket in which bacteria will easily establish themselves."

By similar reasoning the so-called perchloride bath so frequently used for poisoned hands and legs must be condemned; the amount of antiseptic contained cannot possibly have any anti-bacterial action within the tissues where the bacteria are in hiding; while the temperature of the bath cannot be kept at that degree at which it could act as a stimulant to the lymph flow. Hence neither of these methods of hot fomentation have much scientific value.

If, on the other hand, a poisoned finger or foot be momentarily immersed once an hour, in very hot water, a dozen times or so in succession, but be kept dry between these applications, the result will be excellent, as anyone can see for himself by trying it.

The rationale of the method. According to Sir Almroth Wright, the healing process of the above method is due to the action of the normal body tissues. After removing the pus, together with its numerous bacteria, the injection of a saline solution stimulates the tissues to take up a very effective offensive; the sodium chloride causes an increased flow of lymph; the sodium citrate, on the other hand, prevents the coagulation of the lymph secreted, and thus allows of a more or less continuous flow. The hot fomentations aid in the process of stimulating this output of lymph.

It is the normal lymph which Sir Almroth has so brilliantly demonstrated as being nature's own remedy against bacterial infection. If any infected focus can be caused to be flushed with lymph, this infection will be overcome by the anti-bacterial action of the lymph. His discovery of the sodium chloride-sodium citrate mixture enables us to bring about such a result.

It is not my intention to enlarge here on the scientific aspect of the whole question. I must refer you to Sir Almroth's original papers, where he employs the term "Treatment by Physiological Methods" as meaning "procedures, such as the opening and draining of the wound, which bring the anti-bacterial powers of the blood to bear on the infecting microbes."

If this paper may induce some of you to work on the lines as suggested by Sir Almroth, I shall feel that I have not wasted your time in bringing the matter before this meeting.

SOME INTERESTING CASES, WITH COMMENTARIES THEREON.[1]

By **William T. Chenhall, M.D., F.R.C.S. (Ed.),**
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(*a*) Jackson's Membrane.

Since confusion of thought and theory of origin surrounds this structure, it may be well to take *verbatim* Jackson's description of the membrane found in his first case (*Annals of Surgery*, March, 1913):—

"Above the appendix, however, indeed really above the caecum, about the colon, our attention was strikingly attracted.

"Here we observed what looked like an entirely complete new layer of peritoneum, perfectly transparent, investing the colon above the caecum to the hepatic flexure. The membrane was very loosely attached, but moved freely over what appeared to be normal peritoneal coat of the colon beneath.

"This membrane appeared to come on to the colon from the outer parietal wall, into which it quickly faded away, and, above the hepatic flexure of the colon, became lost in the transverse mesocolon. The membrane covered also the whole of the circumference of the colon, and imperceptibly became lost on the inner side of the colon and the inner parietal peritoneum.

"The whole right colon was rather closely confined in the lumbar fossa, and could not readily be pulled forward.

"Likewise, it seemed distinctly shortened in its long axis, and, at places, presented a pleating with the delicate fibrous strands of the investing mem-

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brane, passing right across from one fold to the other. It thus appeared as though the colon was restricted, both as to the action of its circular and longitudinal fibres, and more or less immobilized to the posterior abdominal wall. There were no adhesions between the colon and any continguous structure, and the membrane did not strike us as analogous to an adhesion in any sense.

"It looked, instead, as we have described, as a new, adventitious, vascularized, investing layer of peritoneum. At the time of this, our first observation, it impressed us as some sort of an anatomical freak, which we in no way associated in our mind with the woman's complaints. We made no attempt, therefore, to deal with the membrane in any way, and, with the simple observation of its peculiar appearance, closed up the abdomen. The patient was not in the least improved by our operation—appendicectomy—though we were satisfied, now, with a diagnosis of neurasthenia, and placed her malady in her head and not in her abdomen."

Recent observation in a case confirms my opinion that Jackson's membrane is an embryonal or congenital and not an inflammatory structure.

L.B., æt. 35 years, extremely thin, ill-nourished and of neurotic type.

The patient, a neurasthenic, so-called, stated that she had been all her life a martyr to constipation. During later years she had suffered from severe bleeding piles.

She suffered variable but often severe distress and pain in the region of the appendix, caecum, ascending colon and gall-bladder and frequently nausea in the stomach.

Superadded were difficulties created by early, complete loss of all her teeth and alveolar absorption, which rendered the fitting of a plate with artificial teeth impossible. A curious form of angioma nervosa frequently recurred within the mouth.

Dr. Alfred Chenhall had, during the past few years, exhausted every known method for relieving the constipation. Every effort proved utterly futile. It was found impossible to alter permanently the character of the fæces from their nodular "goat-dung" character. Moreover, he made the very interesting clinical observation, afterwards confirmed with the assistance of X-rays by Dr. Edwards, that respiratory movement was relatively deficient on the right side, though no lesion could be detected.

During the X-ray examination we observed that the right leaf of the diaphragm moved much less than the left. Since the operation I believe that this limitation of movement was due, in some way, to restriction caused by the attachments of Jackson's membrane, which was distinctly traceable across the transverse colon.

Successful operation for piles did not relieve the constipation in the slightest degree.

No history of any acute illness, such as appendicitis, was obtainable. Intuitively, I felt that delayed peristalsis occurred in the large intestine.

Dr. Edwards examined the patient.

At midnight, patient was given four ounces of bismuth carbonate in bread and water.

Ten hours later the small intestine showed low position and caecum half filled. He reported that there was "Apparently some obstruction in the last six inches of the ileum," and that "the caecum conformed to infantile type."

At the twelfth hour the meal was still in the caecum. At the thirtieth hour the meal was in the caecum and ascending colon, but the hepatic flexure had not been reached. Forty-five hours after the bismuth meal it was found to be in the hepatic flexure, but not beyond. The meal had not reached the middle of the transverse colon by the seventieth hour. The transverse colon was low down, and a mass of the meal was still seen in the caecum.

I am deeply indebted to Dr. Edwards for his patient investigation and skilful interpretation.

Our conclusions, thereafter verified at operation, were Lane's kink, caecum conforming to infantile type, but dilated and, in addition, probably Jackson's membrane or some adhesions impairing peristalsis in the caecum and ascending colon.

Lane's kink was caused by a dense band containing vessels. This membrane was, at the ileal attachment, one-and-a-quarter inches in width, and bound the intestine downwards and outwards so as to form a deep loop. Its outer border below thickened the meso-appendix, and, traced outwards, the band was found to pass across the basal inch of the appendix and to become firmly fixed to the parietal peritoneum.

When the band, external to the appendix, was divided, it yielded with a snap, and the appendix and caecum were set free. The appendix was removed and the Lane's band divided, the bleeding vessels being tied.

The upper border of this membrane passed imperceptibly into a strong, yet thin, veily structure, traceable over the caecum and ascending colon.

Its inner border was lost in the peritoneal coat of the colon, but no attachment to the omentum could be found.

External to the ascending colon it was attached to the peritoneum of the parietal wall. The caecum, though congenital in type, was dilated with thin walls, and was gripped, like the colon, by this membrane.

I cannot believe that this structure is inflammatory in origin. The evidence is almost convincing that it is developmental or congenital.

Expediency demanded early completion of the operation. I therefore performed ileo-sigmoidostomy. Excellent recovery followed, and there is warrant for hope that constipation has been overcome. Sufficient time has not yet elapsed to justify a pronouncement of cure.

Dr. J. G. Edwards has forwarded to me the following note on an examination made three months after operation:—

After twelve hours the bismuth meal is lying partly in the sigmoid flexure, partly in the caecum, and partly in the terminal portion of the ileum. About one-fifth of the meal is in the caecum, two-fifths in the ileum, and two-fifths in the sigmoid flexure. There is no part of the meal in the ascend-

ing, transverse or descending colon. The ileum is somewhat dilated near the sigmoid flexure.

After 36 hours about 80% of the meal is in the sigmoid flexure and pelvic colon. About 20% is still present in the caecum and terminal portion of the ileum. No food has passed along the ascending, transverse or descending colon. The arrival of the major portion of the bismuth meal in the sigmoid flexure corresponds to the time of arrival of a meal in an approximately healthy individual, and shows a saving of about 48 hours in this particular individual.

Lane, having returned to the simple operation, endeavours, in addition, to establish a kink to prevent reverse peristalsis carrying the fæces back to the right colon. I did not do so.

I believe Jackson's membrane to be embryonic, but this case does not support the view that it is a prolongation of the border of the great omentum. It would appear to be a separate layer of peritoneum, drawn down by the descent of the caecum and ascending colon to the right iliac fossa.

We know that the attachment of the ascending meso-colon is formed by secondary adhesion to the parietal peritoneum during the migration of the colon and caecum. We know, further, that during migration the appendix may be caught behind the colon, and thus remain fixed in the ascending meso-colon.

So far as I can learn, it is rare to find Jackson's membrane covering the caecum, and yet the caecum, though infantile in type, and thus covered, was greatly distended and correspondingly thin. Not only this, but the membrane was distinctly continuous with the thickened band which passed from the lateral peritoneum across the appendix to join the border of the band causing Lane's kink.

Pathogenesis invokes co-operation of the embryologist and pathologist, since these experts will best guide surgical effort for relief.

Professor Flinh, after examination of human embryos and infants at term, concluded that Jackson's membrane is not inflammatory, but arises from burrowing of the caecum behind the parietal peritoneum. Mayo supports this view. Flinh further contends that, frequently, no inconvenience is caused.

He attributes the membrane to a more extensive attachment of the large gut to the posterior abdominal wall, or, in some cases, more complete fusion of the omentum to the colon, which is dragged down during descent of the caecum, and gives the membrane an attachment on the colon continuous with an embryonic membrane.

Eastman's observations are even more important. He found in five out of twenty-eight fœtuses a peritoneal fold arising from the left or inner side of the ascending colon, and passing over the anterior surface of the gut in an upward, slanting direction, being finally attached to the parietal peritoneum at the right of the ascending colon. Moreover, this fold may be found adherent to the anterior and lateral surfaces of the colon.

He claims that these folds exist before birth, before inflammatory processes of any kind, presumably, have occurred, and are readily demonstrable in one form or another in nearly 20% of fœtuses after the sixth month.

It would be fallacious, however, to hold that all such anomalous membranes are embryonal structures.

Long-continued, oft-repeated, mechanical irritations and mild infections of the peritoneum over these structures repeatedly present as effects fusions, adhesions and contractions, with resultant intestinal disturbances.

What we surgeons require is guidance as to what is, or may be, embryonic, and what inflammatory, since upon such findings rational surgical treatment must be based.

(*b*) Sigmoid Adhesion or Band.

This constitutes a distinct surgical entity, the importance of which has not yet been fully recognized. Pain in the left side of the pelvis is a common complaint among women.

During the past five years I have given considerable thought to this question. Such pain demands careful examination of the anal outlet for fissure, fistula, piles, polypus or other new growth, demands careful examination of the genitalia, and, above all, careful consideration of the importance of the sigmoid as a causative factor.

Pain during defæcation is probably the most important diagnostic sign. It is moderately distressing, and with tenderness may be located about or below the level of the anterior superior spine of the ilium.

When the bowel is loaded, this pain is aching in character, but becomes dragging during the difficulty, usually constant, of evacuating the bowel.

So satisfied am I that this condition interferes with normal peristalsis, causes aching pain during rest when the bowel is loaded, and dragging pain during defæcation, that when I expect to find it I am rarely disappointed.

Accurate diagnosis premises elimination of any lesion, yet this can rarely be done since piles and mucous erosion are not infrequent resultants or accompaniments of sigmoid adhesion.

My purpose will be best served by dealing with this lesion on general lines, rather than by reporting any one special case. I have had no opportunity for investigating the question in men. In women it is frequently present, as every abdominal surgeon of experience has found, though among massed adhesions its real significance is apt to be overlooked, and post-operative pain may continue.

I have recently found the lesion in well-established form, associated with sub-peritoneal fibro-myoma of the uterus, small ovarian and tubo-ovarian cysts, and with massed adhesions around the left tube and ovary.

Its existence, I believe, premises long ante-dated inflammation, though some observers regard it, primarily, as a congenital anomaly.

Evidence has been forthcoming that this view may be correct.

For instance, with moderate repetition, I have found the sigmoid drawn down upon the broad ligament, where it is held by a band traceable over the sigmoid, almost to its mesentery on the outer side, above and downwards to a continuity with the

peritoneum between the round ligament and the Fallopian tube.

Moreover, the regularity with which careful division exposes a lozenge-shaped area requiring closure adds support to the view.

This distinct surgical entity requires more than the ordinary care bestowed upon multiple adhesions, since unless properly dealt with, post-operative pain may, and I believe, often does, persist.

It is imperative that this should be done, especially when correction of retro-displacement of the uterus is indicated, since the latter cannot be performed without undue tension until the band is divided and accurately closed.

I have frequently found that, upon division of this membranous band the sigmoid will drop further down the pelvis, and may then be more easily and freely separated from the tube and ovary.

It is imperative that accurate diagnosis be made between this condition, *per se*, and the distress caused by downward and backward displacements of the uterus, which invariably imply corresponding displacement and faulty position of the ovaries.

Here a feeling of pressure against the bowel rather than a dragging pain during defæcation is complained of. Moreover, displaced ovaries excite a sickening and nauseating pain.

Congenital predisposition may imitate this surgical entity, improper or deficient support arising from enteroptotic conditions may aggravate it by causing intestinal putrefaction, and pathogenic infection and time permit contraction of the bands, which cause the ultimate distress.

I commend this surgical entity as an important one in left-sided, dragging, pelvic pain in females.

(c) Cyst-Adenoma of Ovary.

I submit photographs; the specimen itself has been accepted by Professor Welch for the Pathological Museum, at the University.

The patient, single, aged 38 years, had been suffering two years. Though rapidly becoming thinner, except in the abdomen, she was progressively gaining weight. Immediately before operation she weighed one hundred and two pounds. Four weeks later, her weight was reduced twenty-four pounds.

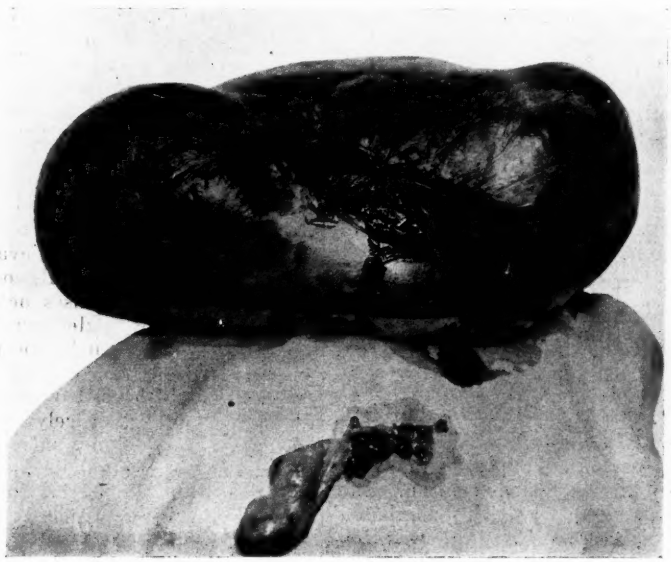
Incision from sternum to pubes was demanded by the size of the tumour, and, even then, infinite care was necessary to avoid rupture of the cyst-wall. Recovery was uneventful and rapid.

The patient, prior to consulting me, had been rubbed, during several weeks, by some advertising masseuse, who promised to cure the swelling.

These tumours are lined by columnar or cubical epithelium of germ-cell origin, and contain highly albuminous, mucinous or gelatinous material. They are usually bilateral, but more advanced upon one side than the other. In so-called unilateral cases a section of the other ovary should invariably be submitted to microscopic examination.

Cyst-adenomata are potentially malignant, and grow by proliferation of epithelial and connective tissue elements. Daughter cysts form either in the outer wall or in the inter-locular septa.

Increased growth, therefore, depends upon epithelial proliferation forming fresh cysts, and upon accumulation of fluid of varying character and consistence.



Papillomata with connective tissue pedicles, may form, the epithelium covering them being continuous with that lining the cyst. Such papillomatous neoplasms may be intra-cystic or extra-cystic, the latter arising from destruction of the cyst-wall, which permits growth into the abdominal cavity.

It is important to remember that the epithelium of ovarian cyst-adenoma, on the other hand, may grow into the underlying tissue and present itself as a true adeno-carcinoma, thus forming a solid mass in the wall of the cyst.

(d) Vesico-Vaginal Fistula.

Mrs. R. H., æt. 42 years, mother of eleven children, was sent to me last September, suffering from an extensive vesico-vaginal fistula of three years' duration. She had passed through three unsuccessful operations. A very large opening, through which I could easily pass two fingers, presented on the anterior vaginal wall, and extended up to and involved the uterine cervix. The anterior extremity of the opening was slightly to the right of and one-inch behind the urethral opening. All urine escaped freely. The bladder itself was greatly contracted. It was difficult during cystoscopic examination to avoid pushing the instrument through the opening into the vagina.

After careful preparation, urinary and general, I

decided to close this extensive fistula by consecutive operations, three in number.

I first closed the anterior half, bringing the parts together from side to side, so as to make the line of union as nearly as possible in the long axis of the vagina. The presence of cicatricial bands rendered approximation difficult, since avoidance of all traction was imperative for securing permanent union. Making very careful dissection, I succeeded by obtaining accurate closure. I used plain catgut reinforced with supporting silk-worm sutures.

With the patient on her back, and an excellent drainage through the still open area, the wound healed.

Three weeks later, I closed the balance of the fistula. This, as I have stated, extended by continuity into a laceration on the right side of the cervix, up to the vaginal vault. Since it was impossible to approximate the edges of the upper portion of the fistula, I decided to use the neck of the uterus in restoring the floor of the bladder.

Having prepared the edges of the fistula, I opened up the neck of the uterus through its laceration, and dissected off very carefully the surfaces down to the muscle on either side, preserving intact the lining membrane of the canal.

Then using the cervix as a flap, I planted it in the fistula opening and carefully sutured it in position. This was both tedious and difficult, but stood the test of filling the bladder with a solution of methylene blue without escape.

A self-retaining catheter was inserted, and Emmett's benzoic acid mixture (benzoic acid 2 drachms, borax 3 drachms, and cinnamon water 2 ounces) was continued, in half-ounce doses, every six hours. Excellent union resulted.

Two weeks later, menstruation, for which I was waiting, occurred, the flow escaping into the bladder. The bladder was irrigated.

Three weeks later, I performed supra-vaginal hysterectomy, in order to eliminate menstruation. The patient made excellent recovery. The maximum urinary content before leaving hospital was ten ounces, and since then it has remained about the same capacity.

I have recently heard from the patient, who states that, except for a slight appearance of blood in her urine, corresponding with each recurring menstrual period, she enjoys excellent health, and is grateful for relief from her continuous and grave distress.

Careful preparatory treatment is imperative. Phosphatic deposit can and should be guarded against. Cystitis presents clear contra-indication to immediate closure of the fistula. Urine for examination may be collected in a sterilized bed-pan.

Closure, without tension, demands approximation of the most easily applied surfaces. Dorsal or left lateral posture must be adopted, according to the position of the fistula and weight of the patient. I prefer the latero-prone position and Sim's speculum for cumbrous patients.

Tenacula form less injurious grips than do forceps, and, with sharp, small-bladed, curved scissors, one can more cleanly, smoothly and efficiently denude surfaces than with a knife, though I often like to define boundaries with a knife.

Bleeding will usually be avoided by not denuding into the bladder mucosa, though it is imperative for good work that denudation be down to it.

Catgut and silk-worm gut are entirely satisfactory as sutures. The secrets of success are careful preparation and strict asepsis.

Reports of Cases.

A CASE OF FRACTURE OF THE PELVIS, WITH RETRO-PUBIC RUPTURE OF THE URETHRA.[1]

Reported for
A. J. Aspinall, M.B., Ch.M.,
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by **C. E. Corlette.**

H. B., aged 24, a carter, was admitted into the Sydney Hospital on July 16, 1914. He stated that he had tripped and fallen so that the wheel of his cart passed over him. It was evident that it had fractured his pelvis. There was a gap to be felt at the pubic symphysis; the left pubic bone was at a higher level than the right; and there was distinctly appreciable mobility shown when the sides of the pelvis were pressed in. There was considerable effusion of blood into the scrotum and the left inguinal region. The house surgeon passed a soft catheter, when a quantity of blood escaped. The catheter was tied in, a firm binder applied round the pelvis, and the legs were bound together. There were no signs of injury to any other part of the body. The pulse was 108, the temperature 98°. The patient made no complaint of pain. Pending further observation, a provisional diagnosis of fractured pelvis, with rupture of the bladder, was made. In the meantime, Dr. Aspinall was summoned. On his arrival, it was noticed that the hæmatoma in the left inguinal region had become larger. Blood continued to escape by the catheter; not only was this so, but there was no evidence that any urine had passed through the instrument at all. It was clear that immediate operation was required, and this was accordingly proceeded with, under a general anæsthetic.

Operation.—An incision six inches long was made in the middle line, from the region of the symphysis upwards. The tissues were found to be extremely bruised, and, at the symphysis, the muscles were torn. On opening up the retro-pubic space, a large amount of blood-clot escaped. The finger was passed down into the space, and the situation examined. The symphysis was found to be widely expanded, and there were fractures of both rami of the left pubic bone, which was quite mobile. The fracture of the lower ramus extended through the ischium, and apparently involved the ischial tuberosity. The point of the catheter, which had been passed in through the penis, was found to be in the retro-pubic space, and not in the bladder. The urethra was torn away from the prostate. There was thus a complete, transverse rupture of the urethra. The bladder was opened suprapubically, and found to be full of a large amount of normal urine, which was not discoloured. This forms an excellent demonstration of the functional efficiency of the sphincter at the outlet of that organ. Crocodile forceps were passed from the suprapubic opening in the bladder through the urethral orifice, and the point of the catheter was grasped and pulled up into the bladder. A fishing-gut suture was passed through the point of the catheter, and, later on, moored by a safety pin, lying outside of the skin, to a portion of the dressing. This suture was employed so that the tip of the catheter could be drawn back again into the bladder should it accidentally escape, and also so that if a new catheter had to be inserted it

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could be drawn in from either end. The device proved very useful.

The retro-pubic space was then opened from below by a free perineal incision for drainage purposes, and, after clearing out clots and cleaning up, free drainage was established perineally and suprapubically by tubing. A large amount of iodoform gauze was inserted, partly to check oozing, and partly to assist in drainage. A tube was also placed in the bladder suprapubically. The parts were sutured up with fishing-gut, after the necessary openings for drainage had been provided.

No attempt was made to effect forcible approximation of the bony parts, as it was evident that it could not be done, or even tried, without serious added risk, and it was very doubtful if any advantage worth the risk could be derived from the attempt.

A pint of saline solution was administered subcutaneously, immediately after the operation. Considering all things, the patient returned to the ward in very fair condition. Rectal salines were ordered every four hours. Next day (July 17) his pulse was 120, but weak, his temperature 99.6°, and he felt comfortable. The urine was draining well from the supra-pubic wound. On the 18th and 19th he had some abdominal distension, and vomited almost incessantly. This ceased on the 20th. On the 21st he developed cough and a pain in the right side of his chest. A friction rub was discovered, localized to a small patch at the site of pain. It seems likely that this was the result of an infarct. The temperature was 101°, pulse 112. On the 21st there was a tenacious sputum. On the 26th the friction rub was still present, with dulness and absence of breath sounds over the patch. The wound was draining well and looking well. On the 30th the pulse and temperature were both down, and the cough easier. He steadily improved in his general condition. The catheter was changed on the 31st; the fishing-gut mooring was found useful, and was continued. The temperature became quite normal. Later on, a hæmatoma in the left groin suppurated, and was opened on August 6. On August 19 another abscess was opened in the right groin, and also one in the scrotum. During September, the patient could flex his thighs with comfort and move about in the bed. The wound-openings formed sinuses, which went on discharging. The temperature showed a tendency to become irregular from occasional difficulties with the drainage. The catheter was retained through the penis in the bladder all the time. Urine drained both suprapubically and through the catheter. There was perfect tolerance of the catheter.

It became apparent that some further effort should be made to try to get healing of the deeper parts, and enable the sinuses to close. Dr. Aspinall had had to leave his hospital work for military duty at the front, so, on February 5, 1915, the patient was placed under an anæsthetic, and Dr. Corlette operated. A probe was passed from the lower part of the suprapubic wound into the space of Retzius, behind the pubis, and down into the left ischio-rectal fossa. The opening was enlarged by incision in both situations, and a digital examination of the part was made. In the upper portion a fracture of the right pubic bone was revealed, with callous formation. Examination of the lower wound revealed a fracture of the ischial bone, running longitudinally through the tuberosity. There was a definite split running from the tuberosity up into the lower ramus of the pubic bone. Internal to this was a dense mass of cicatricial tissue. The catheter ran from the penile urethra into the bladder, along a canal which had a floor, but was without a roof, behind the pubis. All the sinus openings were found to communicate internally with an irregular cavity behind and beneath the bone. An effort was made to drain the space by suitable large openings. Drains were inserted, and the patient returned to bed.

His general condition remained very good after this. The soft catheter was, of course, retained, as before. It never produced the slightest intolerance after nearly eight months' continuance in the urethral canal. This must surely be very nearly a unique record of tolerance.

The unfortunate man was considered to be now a fit subject for admission to one of the State hospitals or asylums, as any further improvement was likely to be extremely slow. He was therefore discharged to the care of one of these institutions.

The lessons of such a case are so obvious that there is little need for comment. Promptitude in recognizing the need for operation and promptitude in carrying it out saved this man's life. His condition after partial recovery was, and is, not one to be envied, but it is the best possible, and the man himself was glad to get what he could.

REMOVAL OF A FOREIGN BODY FROM THE ABDOMINAL CAVITY.[1]

By **J. C. Windeyer, M.B., M.Ch. (Syd.).**

Mrs. A.B., æt. 26, a stoutish woman, wife of a publican, sent for me one evening with the history that two days ago a catheter had been passed into the uterus, on the assumption that she was pregnant. Since then, except for some slight bleeding, nothing had come away. The patient stated that she might have passed the catheter whilst at stool, though this was not probable. On examination, there was a discharge of blood from the uterus, but no sign of a catheter. I sent her into hospital, and, under an anæsthetic, examined her carefully, but could not feel anything in the abdomen. I passed a sound into the uterus, but was unable to feel any foreign body. The uterus was not enlarged, and on curetting, no decidual or placental remains were found.

The patient was advised to remain in hospital, but refused to do so, and left on the fourth day. About two days later, she began to complain of pain in the right loin, just below the costal margin. On examination, there was some indefinite thickening at this point, but she refused operation, and it was not until about a week later that she consented to an operation, as the pain in the loin was becoming agonizing.

By this time, a large club-shaped mass had developed, with its large end lying over the top of the pelvis, and its small end in the loin. I opened the abdomen in the mid-line, below the umbilicus, over the large end of the mass, which consisted of adherent omentum and bowel. There were a few filmy adhesions about the fundus of the uterus, from which the end of the mass was separated by a space of two inches. The mass was adherent to the anterior abdominal wall only at that point in the loin where the patient had complained of pain. I stitched the mass to part of the cut edges of the peritoneum, and closed the rest of the peritoneum before incising the mass, which contained about 11 inches of a gum-elastic catheter, and about one ounce of thick pus. I then pushed a drainage tube down the track of the abscess and closed the rest of the wound. Recovery was uneventful, and the patient left the hospital in about four weeks.

The most interesting features of the case are: (1) The pain over the band of adhesions, (2) the apparent absence of pregnancy, (3) the failure to palpate a stiff instrument lying in the abdomen, and (4) the marsupialization of the abscess cavity to prevent infection of the peritoneum.

Reviews.

FORENSIC MEDICINE AND TOXICOLOGY.

The eighth edition of Husband's text-book has been issued in two volumes. The first, on Public Health, has been already published. This volume,[2] on Forensic Medicine and Toxicology, has been enlarged and revised by Dr. R. J. M. Buchanan, Professor of these subjects in the University of Liverpool. The book, which is well illustrated, is printed in clear type, and contains 417 pages. It is divided into two sections, the first dealing with medical jurisprudence, and the second with the subject of poisons.

The part of the book which treats of legal medicine is divided into fourteen chapters. Chapters one and two summarize the forms of legal procedure, and deal with medical evidence in general. The succeeding chapter treats of identity and the examination of the living and the dead. Attention is paid to the modes of dying, sudden death and

[1] Read at a meeting of the New South Wales Branch of the British Medical Association on August 13, 1915.

[2] Text-Book of Forensic Medicine and Toxicology (late Husband's), by R. J. M. Buchanan, 1915. Edinburgh: E. & S. Livingstone; Demy 8vo., pp. 417, with 46 illustrations and 1 plate. Price, 5s. net.

the signs of death. The fourth chapter contains instructions in regard to post-mortem examinations and exhumations. The next chapter is headed assaults, homicide and wounds. The sixth chapter contains a discussion of the medico-legal investigation of stains suspected to be caused by blood. The practical directions given under the headings of physical examination, microscopical examination, chemical investigation, spectroscopic examination and biological testing, will be found most useful. The methods are described in simple, straight-forward language, which should enable the medical practitioner to perform the tests with ease. No mention is made of the recent work of Reichert and Brown on the forms of crystals obtained from the colouring matter of the blood of different species of animals. These authors claim that the physical constants of the crystals are different in the crystals of hæmoglobin from each species of animal. The differentiation of the blood-stains from different animals by the precipitin test is described in some detail. The author notes the importance of using a fixed amount of antiserum in all the tests—a practice which is necessitated by the results of recent research. The succeeding four chapters treat of burns and scalds, contusions and wounds, suffocation, drowning and death from starvation, cold, heat, lightning and electricity. The eleventh chapter discusses offences against chastity. The next chapter is devoted to a consideration of fœticide and criminal abortion. A brief account of the varieties of insanity is given in the next chapter, which contains an excellent summary of the law relating to insanity as far as it concerns medical practitioners.

The portion of this work dealing with forensic medicine can be highly commended. The language is simple and the information is set forth in concise, synoptic sentences.

The second section of the book, treating of toxicology, is subdivided into fifteen chapters. The first chapter deals with the definition of a poison, the sale of poisons, the general evidence of poisoning, the treatment of cases of poisoning and the general methods of examination to detect poisons. The remaining chapters treat of the separate poisons. This part of the book contains such information as will be valuable to the general practitioner. The action of the poison is succinctly described, and a brief account of the means for detecting the poison appended. It must, however, be noted that the accurate detection of a poison requires special skill. The estimation of these substances can rarely be satisfactorily carried out, except by a chemist, and preferably by a bio-chemist, who can employ physiological methods if they are requisite. This portion of the work is not so thorough as the earlier portion. The assistance of a chemist at the next revision of this section is recommended to the author. No mention is made of the notable advance in the detection and estimation of substances by spectroscopic methods. The use of the quartz spectrograph enables the toxicologist to examine the absorption bands in the ultra-violet region beyond the visible spectrum. Not only can these bands be employed for the detection of the poison but the amount may be estimated by these means. Such estimations have the great advantage that the substance is not destroyed in the method employed for determining the quantity of the poison present. It is thus possible to repeat the estimation at any time, and to retain the poison as direct evidence of its presence and amount.

HUMAN PHYSIOLOGY.

The third volume[1] of the translation of Luigi Luciani's great text-book has been edited by Dr. Gordon Holmes. The translation has been made by Miss F. A. Welby from the fourth Italian edition, which was published in an enlarged and revised form in 1913. On this occasion a commemorative medal and an album containing the autographs of almost all the world's eminent physiologists were presented to the author. This volume deals with the muscular and nervous systems. The first 100 pages are devoted to a lucid and instructive account of the general physiology of muscle. Seventy-five pages are required for the discussion of the mechanics of the locomotor apparatus, of phonation and of articulation. The remaining 550 pages contain the best account of the physiology and of the functions of the nervous system extant in the English language. The articles are written from the historical and evolutionary standpoint, and are remarkable for their breadth of view. We do not fail to note the charm of the author's style, which has been preserved by the translator in this volume with the same success as in the previously issued two volumes. The editor has added a list of the more important English papers dealing with the subject matter at the end of each chapter. The work is profusely illustrated, and the publishers must be congratulated on the fine character of their reproductions. Where so much is well done it is difficult to select portions for special praise. If such a selection is attempted, attention must be drawn to the very readable account of the autonomic system. The treatment of the physiology of the fore-brain also deserves congratulation.

[1] Human Physiology, by L. Luciani. Translated by F. A. Welby, with a Preface by J. N. Langley; in Five Volumes. Vol. III., edited by G. M. Holmes, Muscular and Nervous Systems. London: Macmillan & Co.; Med. 8vo., pp. 677, with 308 illustrations. Price, 18s. net.

Hospitals.

TOOWOOMBA GENERAL HOSPITAL.

The Committee of the General Hospital, Toowoomba, Queensland, has published its report for the year ending December 31st, 1914.

The medical statistics show:—

	Males	Females	Total
Number of patients remaining in Hospital, Dec. 31st, 1913....	41	31	72
Number of patients admitted during the year, 1914	767	523	1290
Number of patients remaining in Hospital Dec. 31st, 1914....	51	31	82
Number of patients discharged, cured or relieved	684	491	1175
Number removed to other institutions	5	4	4
Number died	48	26	74
Number discharged at their own request	20	2	22
Number of outpatients	—	—	1344
Rate of mortality for all cases ..			5.43%
Rate of mortality after deducting 13 deaths occurring on the day of admission			4.47%

The balance sheet shows that the income from all sources, including £5043 from the subsidy given by the Government was £10,665. The expenditure amounted to £10,309, leaving a credit balance of £356. The annual cost per bed, including the cost of the department for out-patients, was just £100. A sum of £250 has been set aside for the equipment of the X-Ray department. A satisfactory feature of the financial year is an increase in general donations and subscriptions of £449, which is additional to £250 subscribed for the X-ray outfit, and to £10 donated towards the provision of a ward for children. During the year 398 operations were performed with seven deaths. There were 181 admissions for acute infectious diseases. The cases of enteric fever numbered 70, with five deaths. There were 53 admissions for diphtheria, with no deaths. Cases of cancer numbered 28 with seven deaths. There were 188 admissions for injuries with seven deaths. The admissions for appendicitis numbered 74, with no deaths. Appendicectomy was performed on 57 patients, with no mortality.

CHILDREN'S HOSPITAL, PERTH.

At a meeting of the General Committee of the Childrens' Hospital, Perth, held on August 9, 1915, Lady Hackett being in the chair, it was announced that, in response to the special appeal recently made for £3,000 to provide maintenance expenses, the sum of £3,395 had been collected. This amount included £450 donated by the Rose Club and £500 from Mr. Harry Boan. In the face of the many patriotic calls at present being made, the result was considered as extremely satisfactory, and showed that the hospital enjoyed the full confidence of the public.

The Medical Journal of Australia.

SATURDAY, AUGUST 28, 1915.

Departmental Enquiries.

Within recent times several departmental enquiries have been held, in the course of which medical matters and the actions of medical men have been subjected to analysis. When charges of mismanagement or negligence in public affairs are made, the Minister, under whose care the service is performed, is expected to institute some form of public inquisition, partly with a view of the prevention of a recurrence of the trouble, and partly to fix the responsibility, and if necessary to impose some penalty on the responsible officer. With these objects we are in full accord, but we find it necessary from time to time to call attention to the practice of making medical men the playthings of politicians, and at times the scapegoats.

A few weeks ago we called attention to the appointment of Colonel Irving, the Chief of the General Staff, as Commissioner to enquire into the causes of the alleged neglect in connexion with the reception in Victoria of the sick and wounded soldiers, and with their transmission to other States. The result of his enquiries demonstrated that the Minister for Defence had made a serious mistake in suspending Lieutenant-Colonel Cuscaden, and we ventured to record our gratification at the announcement that this officer had discharged his duties to the entire satisfaction of the Department. Since no apology has been forthcoming from the Minister to this ill-used officer, or rather medical practitioner, it has become necessary that the whole matter should be ventilated in non-ambiguous terms.

It will be remembered that when public attention was called in the Senate to the "Kyarra muddle," the Minister for Defence called upon Major Dowse for an explanation. The explanation was regarded as unsatisfactory, and as a result, both he and Lieutenant-Colonel Cuscaden were suspended, pending an official enquiry. We wish to emphasise the fact that the Principal Medical Officer was not accorded an opportunity of giving an explanation or of defending his actions.

The enquiry brought to light the fact that there had been negligence on the part of the responsible members of the administrative staff of the 3rd Military District, but that extenuating circumstances had existed. The Principal Medical Officer had issued proper orders, and had discharged the duties of his office in a satisfactory manner. The Minister thereupon instructed both officers to return to duty. No word was uttered or written in regard to the gross injustice done to Lieutenant-Colonel Cuscaden.

The facts to which we would draw attention are the following:—Lieutenant-Colonel Cuscaden is in normal times a civil practitioner, who enjoys the high esteem of his colleagues. When normal times are restored he will return to civil practice. He is dependent on the good reputation which he has earned, and will suffer if the slur cast on his character be not removed. He was suspended without any enquiry, and restored as the result of an enquiry. Fair-play and justice have not been accorded him. It is impossible for the Minister to rectify the wrong done to him as a military officer, but a public statement admitting that an injustice has been done to the practitioner would put him right with his patients.

An important principle is involved in this case. Medical practitioners have shown themselves to be very willing to serve the Empire. They bring their skill, ability and knowledge, and are prepared to spend themselves in the public service. But we demand that fair-play and justice shall be done to them, and that reputations shall not be wrecked either to overcome administrative difficulties or to satisfy political motives. In the case of Dr. Cuscaden an apology is due. The profession will not be satisfied unless it is given, and will regard it as a guarantee of good faith for the future.

MEDICAL TREATMENT.

Public opinion has gradually come to recognize that the care of the sick should be undertaken by duly trained men, who are qualified by experience and knowledge to undertake the treatment. The growth of this opinion is attested by the Medical Acts in force in many civilized lands. These restrict the use of titles implying medical training to those who have attended prescribed courses of instruction in various institutions. Not only must the

treatment of the sick be under the direction of legally qualified medical practitioners, but it is highly desirable that the whole responsibility for this treatment should rest on the medical man. It is neither expedient nor appropriate that laymen should have control of the medical treatment of sick persons, to determine the length of time during which they should be under medical supervision or on what lines the curative measures should be directed. It is now usually granted that the medical officers alone shall determine whether a patient is suffering from illness in such a degree as to warrant entrance to an institution, and that the medical officers shall discharge the patient when sufficient recovery has ensued. Attempts made by unqualified and inexperienced laymen to determine what treatment shall be adopted by any medical man in charge of patients should be resisted by the medical practitioner in the interests of his patient.

The endeavour of those placed in highly responsible administrative positions in certain States of the Commonwealth to inform the medical profession as to the lines of treatment to be adopted in childbirth, and in other conditions, may be due to a desire to bring under the notice of the profession information that those engaged in the daily care of the sick have missed, so that the patients may not suffer through ignorance. Though this excuse may be offered, these particular attempts to teach the medical profession with second-hand information, culled from newspapers, can only be due to a failure to appreciate the fact that the medical practitioner spends years in acquiring the rudiments of knowledge that the centuries have accumulated in regard to man, his diseases and their treatment. Persons who have no knowledge of the actual conditions concerning which they offer advice would do well to avoid wide-spread publicity for their remarks. The profession has shown in the past that it is not only willing to learn from the laymen qualified to give instruction, but to pay homage to the genius that can do ought to alleviate the misery of human suffering. In the future it will be equally ready to profit by the experience of those laymen competent to deal with medical questions.

The treatment ordered by medical practitioners for the sick should be determined mainly by the characters of the diseases, and only indirectly by the financial circumstances of the patients. It has been the proud boast of the British medical profession that the poor and needy in hospitals receive the best treatment procurable, regardless of cost. While the medical man must take note of the means of a patient in arranging for treatment, that treatment which is essential to the recovery of any patient should not depend on the purse of the sick person. In our last number we notice that men suffering from syphilis at Liverpool camp received injections of salvarsan when they could afford to pay for the drug. We do not wish to discuss the question as to whether salvarsan should be administered in every case of syphilis. We do, however, urge on the military authorities that no medical man, in the Army Medical Service, who thinks that a particular patient needs salvarsan to expedite recovery should be debarred from using the remedy on the ground of its cost. Rich and poor sick soldiers in camp should be treated on the same lines, and no soldier should be prevented by poverty from receiving a remedy which is regarded as more efficient in curing his ailments, and which is given to his wealthy comrade who pays for it.

The Commonwealth has undertaken to provide sick soldiers with efficient medical treatment, and the efficiency of this treatment should in no degree depend on payment from the private resources of individual soldiers.

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ANNIVERSARY OF THE VISIT OF THE BRITISH ASSOCIATION.

A year ago the members of the British Association for the Advancement of Science, who accepted the invitation of the Government of the Commonwealth to hold their eighty-fourth meeting in Australia, were approaching the end of their visit. Before leaving our shores the general officers of the Association issued an open letter to the people of Australia, in which they acknowledged very gratefully the extraordinary public interest which had been aroused in the proceedings of the meeting, and which had been maintained in face of the lamentable events which had occurred in Europe during their stay here. When representatives of the Australian Universities and leading scientific societies sought

the support and co-operation of the various Governments within the continent they directed attention to the utility of the proposed meeting in stimulating public interest in the advancement of knowledge. The fact that a much greater number of members was enrolled for this Australian meeting than for any previous meeting in the history of the Association is a practical illustration of the interest that the visit aroused among our citizens.

During the last few weeks the report of the proceedings of the members has been circulated among us. Externally the volume appears of less size than its predecessors, but the diminished thickness is not due to fewer pages, but to the use of thin paper to lessen the weight of the report. Its arrival in Australia should remind us of the objects of the British Association for the Advancement of Science, which are to give a stronger impetus to scientific inquiry, to promote the intercourse of those who cultivate science in different parts of the British Empire with one another, to obtain more general attention for the objects of science, and to assist in the removal of any disadvantages of a public kind which impede its progress.

It was hoped that this visit would foster the acquisition of knowledge in Australia for its own sake. We recognize that the world is better for the accumulation of knowledge during the last few centuries. A better acquaintance with the characters of the phenomena of nature and the laws that govern their occurrence provides us with the means of combating the prejudices which are our inheritance from the ignorance of the dark ages. The study of nature is also of great value from the utilitarian point of view. A clear insight into the sequence of natural events imparts information which can be turned to great practical account. The supply of products from animal and vegetable sources in any country can be greatly increased by the proper application of the knowledge gained in investigations of a purely scientific kind. The immense development of industrialism, which is regarded as the most important factor of life in the nineteenth century, is founded on the achievements of the chemical, physical and engineering sciences.

The events of the last year have, however, had a greater influence in directing the attention of the public to the need of a closer alliance between knowledge and practice. If we are to maintain our position in the vanguard of progress, and to uphold those constitutional principles which guarantee that freedom which is the proud possession of the British Empire, the Commonwealth, in common with the remainder of the Empire, must increase its economic and industrial efficiency. Not only is increased efficiency required to enable us to assist in bringing this war to a successful conclusion, but it is necessary to enable the country to recover from the financial strain of the war. The community is grasping the fact that every member should be employed in that capacity which will use his talents to the best advantage. Those who have received special training and have acquired exceptionable knowledge must be placed in those positions in which their attainments can be utilized for the common good. Opportunities must be made to develop the latent resources of the Commonwealth to the fullest extent possible. The State needs the whole-hearted support of every citizen, whose efforts must be directed by sound organization for the welfare of all classes within its boundaries. If, in this way, our people are led to recognize the economic necessity of co-ordinating the labour of every person, the blood of our manhood will not have been shed in vain.

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EYE-PRESERVING GLASS FOR SPECTACLES.

Since March, 1909, Sir William Crookes, President of the Royal Society of London, has been experimenting on the effect of adding various metallic oxides to the constituents of glass, in order to cut off the invisible rays at the ultra-violet and infra-red ends of the spectrum. The principle object of this research,[1] which was carried out in connexion with the Glass Workers' Cataract Committee of the Royal Society, has been to prepare a glass which will cut off those rays from highly heated molten glass which damage the eyes of workmen, without obscuring too much light or affecting materially the colours of objects seen through the glass when fashioned into spectacles. Since the work necessitated an examination of the screening properties of glass plates for ultra-violet and luminous light, the scope of the research has been enlarged to embrace the testing of a large series of glasses specially selected for practical use in the manufacture of spectacles. An examination of the light from a glass-maker's tank of molten glass has shown that the light contained a preponderance of infra-red radiations. It thus appears to be probable that the cataract of glass-workers is due to the action of heat rays. Other

[1] Phil. Trans. Roy. Soc., London. A. 214, p. 1, 1914.

evidence makes it certain that exposure to excess of ultra-violet light injuriously affects the eye. That ultra-violet light acts on the deeper-seated portions of the eye is shown by the intense fluorescence of the crystalline lens induced by these rays. Besides the invisible rays at each end of the spectrum, the purely luminous rays, if present in abnormal intensity, are found to damage the eye. Sir William Crookes has sought to find a glass that will cut off as much as possible of the heat radiation, and also to prepare glasses that remove the ultra-violet rays while they are more or less transparent to waves exciting luminosity. He has succeeded in preparing glasses which cut off over 90% of heat radiation, which are opaque to the invisible ultra-violet rays and which are sufficiently free from colour to be scarcely noticeable when used as spectacles. He has not been able to combine in one specimen of glass these three desiderata in the highest degree. The ideal glass which will transmit all the colours of the spectrum, cutting off the invisible rays at each end, is still to be discovered. Without counting numerous preliminary experiments, he has made and fully tested over 300 tinted glasses, the quantitative composition of which has been accurately ascertained. These glasses were prepared by adding various amounts of the oxide of different metals to a soda flux. The metals which have been employed are cerium, chromium, cobalt, copper, iron, lead, manganese, nickel, uranium, neodymium, and praseodymium. Each of these glasses was then tested in regard to athermancy, adiactinity, and transparency. About 30 of these glasses have been selected as possessing such valuable qualities as to make them useful for ophthalmic purposes. They had been classified into four groups. The first group consists of those glasses which absorb heat rays. Spectacles of these glasses scarcely appear to obstruct light at all, while the colours of object viewed through them are practically unchanged. Six samples of glass, absorbing from 63% to 98% of the heat rays have been prepared. The second group contains glasses which cut off varying amounts of the ultra-violet radiation. These glasses have been prepared in different colours, so that a choice of tints is available, to suit individual tastes. The third group includes glasses which transmit different amounts of luminous rays. These glasses are divided into two groups: those which transmit from 70% to 90% of the luminous rays, but which vary slightly in colour, and those which transmit less than 70% of the light rays. The fourth group is composed of those glasses suitable for the reduction of glare. These glasses cut off a certain proportion of each of the three types of radiation. Six glasses have been prepared which absorb different amounts of each type of ray.

Various optical companies have commenced the manufacture of these glasses, which are now being placed on the market. Samples of these glasses are reaching Australia, and, before long, opticians will be able to supply lenses made of any type of these glasses. Since the introduction of electric lamps containing metallic filaments, many persons have found that the light is injurious to their eyes. These effects are mainly due to the high proportion of ultra-violet rays emitted by these lamps. Such persons will experience great relief from the use of glasses cutting off the actinic rays. In different parts of this country complaints are frequently made of the unpleasant effects of glare. Bright sunlight not infrequently occasions eye trouble. Glass is now available in various tints for protection against this glare. It will be possible for the oculist to prescribe what measure of protection he considers desirable. We must feel grateful to the President of the Royal Society of London for bringing to a successful conclusion a research which will be of such great economic value to the manufacturers of glass in the British Empire.

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THE WEIGHT OF INFANTS AT BIRTH.

The Anthropometric Committee of the British Association for the Advancement of Science reported in 1883 that the average weight at birth of 451 male infants born in London and Edinburgh was 113.6 ounces, while that of 466 female infants was 110.4 ounces. According to Pearson, the mean weight at birth of 1,000 male infants born in London at the Lying-in Hospital at Lambeth was 116.8 ounces, while that of 1,000 female infants was 113.2 ounces. The average weight of 100 male infants, chosen without selection from the records of normal, full-term deliveries at the Maternity Hospital at Birmingham, England, was 114.9 ounces, while that of 100 female infants was 113.5 ounces. These various estimates of the weights of infants born in the British Isles are in excellent agreement with one another. Dr. T. Brailsford Robertson[1] has had access to the records of the Queen's Home, a maternity hospital in Adelaide, South Australia. The patients admitted to this hospital belong to the labouring and unskilled artisan classes. From these records he has found that the average weight at birth of 147 male infants, born in South Australia, the fruit of normal confinements, is 127.3 ounces, while that of 264 female infants is 121.2 ounces. From these figures the fact emerges that South Australian infants weigh from 8 to 10 ounces more than infants born in Great Britain. This fact is remarkable, since the Australian people, with regard to racial constitution, are virtually British. Statistics show that 97% of the population of Australia have been born either in Australasia or in the United Kingdom. The evolution of the Australian people may therefore be regarded as that of the British people under changed climatic, social and economic conditions. Dr. Brailsford Robertson infers that the superior weight of the Australian infant at birth is attributable to the factors enumerated above, as affecting the evolution of the Australian people. The climate is much less rigorous than that of England, food is cheaper in proportion to income, and the social and economic conditions are so far an improvement upon those prevailing in England that, whereas women of the labouring and unskilled artisan classes in England have frequently to supplement the income of the family by their own exertion, those of the corresponding classes in Australia confine their physical

[1] University of California Publications. Vol. IV., No. 20, 1915.

activities to the management of their households and families. This condition of affairs, quite apart from the possible direct effects of physical labour upon the mother, must have an important, indirect effect in ameliorating the nutritional and hygienic conditions within the household. Not only are South Australian infants heavier at birth than infants born in the British Isles, but they are also from 5 to 6 ounces heavier at birth than infants of English descent born in the Eastern State of America. Bowditch found that the average weight of an Anglo-American male infant at birth was 120.8 ounces, and that of an Anglo-American female infant was 115.7 ounces. The Anglo-American infant is thus intermediate as regards weight at birth between the Australian infant and the infant born in the British Isles. It has been suggested that the mean weight at birth of infants of the same race is a very sensitive criterion of the social and economic environment in which they are born. This hypothesis gains support from the statistical data obtained in South Australia.

Naval and Military News.

Action is being taken by the military authorities to acquire full possession of the camp-site at Broadmeadows, in Victoria. The estate on which the camp is situated occupies 145 acres in area. It is proposed to erect and organize a large hospital at the camp. The building will be practically a permanent construction, and may eventually be extended to form a central military hospital. When completed, the establishment will form a complete clearing hospital of 120 beds, where invalids can be properly treated by a trained nursing staff.

Captain A. W. Scot-Skirving, second son of Dr. R. Scot-Skirving, of Sydney, has been reported wounded. He held a commission in the Fifth Royal Irish Fusiliers. Captain Scot-Skirving was a graduate of medicine of the University of Sydney, and filled for a term the position of Resident Superintendent of the Royal Prince Alfred Hospital, Sydney.

A cable message received in Sydney from Mrs. Newmarch, wife of Lieutenant-Colonel B. J. Newmarch, A.A.M.C., states that her son, Lieutenant J. H. Newmarch, is at present in hospital at Alexandria, badly wounded.

It is reported that Captain L. W. Dunlop, A.A.M.C., has been wounded. Dr. Dunlop was a graduate of the University of Sydney and Medical Superintendent of the Sydney Hospital for some time.

We note in the *London Gazette*, under date of June 28, 1915, that the following gentlemen have been granted temporary commissions as Surgeons-General in His Majesty's Fleet: G. L. Cheatle, C.B., C.V.O.; Sir W. Watson Cheyne, Bart., C.B., P.R.C.S., F.R.S.; R. Johnson; Sir W. Macewen; H. D. Rolleston.

We note in the *London Gazette*, under date of July 1, 1915, that Temporary Captain R. A. R. Wallace, having ceased duty with the Australian Hospital, relinquished his command from May 1, 1915.

The following casualties have been reported in the *London Gazette*, and published in the London daily press:—

Wounded.—Captain H. J. Gorrie, R.A.M.C., 3rd Highland Field Ambulance; Captain W. J. Harrison, R.A.M.C., attached to the 6th Northumberland Fusiliers.

Casualties in the Mediterranean.—Died: Lieutenant E. A. Wright, M.B., R.A.M.C. Wounded: Lieutenant H. Pierce, R.A.M.C.; Lieutenant-Colonel W. B. Pritchard, R.A.M.C., 2nd East Lancashire Field Ambulance; Captain E. D. Gairdner, M.B., R.A.M.C., attached 5th Royal Scots Fusiliers; Lieutenant H. J. M. Cursetjee, I.M.S., attached 14th Sikhs.

The Canadians covered themselves with glory at the battles of Ypres and Langemarck, but the cost has been heavy. The casualties reported up to the present time number over eight thousand. At the beginning of May the Canadian troops, including those in training, numbered 108,760. The following casualties have been reported in the Army Medical Services:—

Killed: Major W. P. Dillon, of Ottawa (No. 2 Canadian General Hospital, Le Tréport, France), thrown from horse; Captain A. C. Bastedo, Bracebridge, Ontario.

Died of Wounds: Captain George Clarence Gliddon, Union, Ontario (10th Battalion).

Wounded: Major J. L. Duval, St. John, New Brunswick (First Field Ambulance); Major D. Sutherland, Norwich, Ontario (First Infantry Brigade); Major W. W. Nasmith, of Youngstown, Alberta (46th Regiment); Major D. A. Clarke, Toronto (Third Brigade Artillery); Major G. S. Mothersill, Winnipeg (Tenth Battalion); Captain G. H. McLaren, Toronto (Forty-eighth Highlanders); Captain Roy McGibbon, Sherbrooke, Que. (First Field Ambulance); Lieutenant F. C. Bell, Winnipeg (Third Field Ambulance); Lieutenant W. L. Watt, Winnipeg (Third Field Ambulance).

Wounded and Prisoner of War at Maintz: Lieutenant W. M. Hart, Regina (Fifth Battalion).

Reported Killed: Lieutenant W. Fitzpatrick, Pipestone, Manitoba (First Field Ambulance).

The Hon. Secretary New South Wales Branch of the British Medical Association, has received the following letter:—

Dear Sir,—In order to carry out the proposal re medical attendance on returned invalids, I shall be pleased if you will supply to the Staff Officer for Invalids, Major Crawford Robertson, a list of the members of your Association, arranged according to the towns and districts in which they reside, so that he may be able to issue cards to soldiers, and to notify members of your Association of the invalids placed under their charge.

Medicines and dressings—not being patent or proprietary articles—will be paid for by the Department if certified as correct by the Medical Officer attending the case.

The Acting Director General of Medical Services will be pleased, if requested, to arrange that any Medical Officer attending invalids is given a commission in the Army Medical Corps Reserve. Should any member of your Association desire to have a Commission in the Army Medical Corps, he should notify the Principal Medical Officer, who will furnish the necessary forms for submission to Headquarters and to the Hon. the Minister for Defence.

Faithfully yours,
(Signed) R. H. FETHERSTON, Colonel,
Acting Director General of Medical Services.

VOLUNTEERS FOR SERBIA.

A short time ago an appeal was made by the Serbian Royal Legation in London for medical assistance in Serbia. More than one hundred physicians volunteered their services, and the following have been accepted, and are on their way to that country: Drs. F. Perras, Montreal; Irma Le Vasseur, Quebec; —. Brault, Port Daniel; J. Richardson, Quebec; Albert Palin, Winnipeg; J. Hetherington, Carievale, Sask.; W. Bourjeantz and P. E. Lavoie, Marcelin, Sask.; A. W. M. Leclair, Letellier, Manitoba; and A. Avila Walters, Quebec.

LIVERPOOL CAMP ENQUIRY.

The Commissioner, Mr. Justice Rich, appointed by the Government of the Commonwealth has issued his report dealing with Liverpool Camp, and with the charges made by Mr. Orchard against Captain Schlink. We propose to publish a resumé of the evidence and of the report in next week's issue of this journal.

The announcement is made that Dr. William Henry Bragg, F.R.S., has been appointed to the Quain Chair of Physics in University College, London, in succession to Professor F. T. Trouton. Professor Bragg was for some years professor of physics in the University of Adelaide. His able and ingenious experiments on radiation attracted world-wide attention. Some years ago he accepted the Chair of Physics at the University of Leeds.

It has been announced from Amsterdam on August 22, 1915, that Professor Paul Ehrlich died suddenly in a laboratory at Hamburg. We hope to publish a brief account of his career in next week's issue.

Abstracts from Current Medical Literature.

SURGERY.

(83) Recent Advances in Syphilography.

C. M. Williams gives a review of the recent advances in syphilography (*Med. Record*, June 26, 1915). He finds that all Koch's postulates save No. 5 have been established since the artificial cultivation of the *spirochaeta pallida* by Noguchi, the possibility of sub-culture and the discovery of their pathogenicity for rabbits. It has been shown that the infection may become generalized as early as the first day, but this usually takes place in the third week. The cerebro-spinal fluid becomes infected in the fourth week. Transmission of infection may occur many years after inoculation. It remains possible as long as a single living spirochaete is in the body. The diagnosis during the early stage is best carried out by the search for spirochaetes, with the assistance of the dark field microscope. After three weeks the Wassermann test and Noguchi's luetin test are reliable. An injection of alcohol changes a positive Wassermann reaction into a negative one. One dose of salvarsan may effect the same change. The Wassermann reaction is regularly positive in yaws, relapsing fever, leprosy and the febrile stages of certain malarial infections. It is often positive in carcinoma, pemphigus, septic conditions, tuberculosis, trypanosomiasis and acidosis. Treatment should be commenced at as early a date as possible. If applied within a fortnight of infection, between 80% and 90% of cases may be cured. The most modern form of treatment is described as follows: An injection of mercury or a week's inunction is followed by a course of salvarsan or neosalvarsan. The dose must be small at first, and may be increased gradually, or may be small all through. The third stage of the treatment consists in the giving of iodides or sulphur. The treatment is then commenced over again, until a negative Wassermann reaction is registered. The cure is controlled by repeated Wassermann tests, applied at least six weeks after the treatment is stopped. In general paralysis and tabes, salvarsan may be injected in very small doses of neo-salvarsan into the spinal canal. Salvarsanized serum may be injected into the spinal canal, while other observers prefer the injection of serum containing 0.02 to 0.04 grain of perchloride of mercury in solution. Congenital syphilis is best treated through the mother during pregnancy. The treatment should be very active, and should be begun early, but is useless if applied before pregnancy. Cure may be assumed if the Wassermann reaction is negative on repeated tests during at least one year after treatment has been stopped. The reaction should be negative to a provocative injection of salvarsan.

(84) Genesis of Carcinoma from Gastric Ulcer.

J. C. Hemmeter (*Medical Record*, July 3, 1915) doubts the accuracy of the statements frequently made by English and American surgeons that cancer of the stomach originates from chronic ulcer in 60% to 70% of all cases. He has studied the ætiological connexion between the two conditions by four methods: (1) By means of statistics. He quotes the figures of Hirshfeld, who considered that his figures showed that no connexion existed between chronic gastric ulcer and carcinoma. (2) By means of prolonged clinical observation on cases of gastric ulcer, in which gastro-enterostomy had been performed and the ulcer left *in situ*. Billeter's statistics from Professor Krönlein's clinic showed that only two cases out of 116 on whom gastro-enterostomy was performed between 1888 and 1910 developed gastric cancer. (3) By means of long clinical observation on cases treated by medical methods, such as rest, diet, internal medication and duodenal feeding. Hemmeter notes that only three cases out of 232 which he had treated between 1890 and 1911 had developed carcinoma. (4) By means of the methods of pathological histology. He considers a carcinomatous degeneration to be secondary when the carcinomatous infiltration of the floor of the ulcer is only partial, and when the muscular coat at the edge of the ulcer is curled or rolled up and the outer border of the carcinoma is separated by a well-defined line of demarcation from the remaining floor of the ulcer. In order to be certain that a gastric ulcer has developed into a carcinoma, a case must be under observation from an early stage. He considers that there is no doubt about the development when the ulcer has a typical peptic form, when the base shows no carcinomatous tissue, and when the edge of the ulcer reveals a small degree of carcinomatous infiltration. It must be remembered that peptic ulcers may form in association with gastric carcinoma. It is not uncommon to see beneath the microscope small brown sloughs (hæmorrhagic infarcts) in the recesses of a carcinoma and at the border of the adjoining mucous coat. These sloughs give rise to ulcers in connexion with the centre or the borders of pre-existing carcinomata. He gives the history of a case to prove this contention. When a chronic gastric ulcer and a gastric carcinoma occur in the same stomach, it is difficult to decide whether they were formed simultaneously or the carcinoma existed previous to the gastric ulcer or *vice versa*. Hemmeter mentions a number of additional facts to support his opinion. The majority of cases of carcinoma of the stomach give no anamnesis of gastric ulcer. Secondary carcinomatous degeneration of scar tissue is infrequent at the seat of an excised gastric ulcer, and no case with such a condition has ever been reported in the literature. The author is of opinion that the anatomical similarity of the two ulcerations does not signify that one form has arisen from the other.

(85) Carcinoma of the Stomach.

John F. Erdmann (*Medical Record*, July 3, 1915) reports a further series of 30 cases on whom he has operated for cancer of the stomach. He lays great stress on early diagnosis, and suggests that an exploratory laparotomy should be performed on all cases, early or late, to confirm the diagnosis. In dealing with early diagnosis, he lays stress on the value of radiography, various food tests, and certain symptoms, as the intake of food, pain, vomiting, the presence of blood in the stools and vomit and emaciation. He considers that a palpable tumour does not necessarily imply an inoperable cancer. Even a fixed palpable tumour may yet be treated surgically, for example, when the cancer is adherent to the pancreas. The presence of a tumour, however, modifies the post-operative diagnosis. He deals firstly with the radical treatment of gastric carcinoma. In cases of cancer of the pyloric portion of the stomach, he performs partial gastrectomy, and he restores the continuity of the alimentary canal by the Polya-Reichel method, by anastomizing the cut proximal end of the stomach into the side of the jejunum, with a mortality only slightly higher than that obtained after posterior gastro-enterostomy. On the other hand, in cases of cardiac carcinoma he has had discouraging results, since the patients require positive pressure anæsthesia, and often need a transpleural operation. In performing the radical operations in advanced cases, he has excised the transverse colon on four occasions, while in several cases he has removed a thin shaving from the pancreas. With regard to palliative operations, he believes that partial excision is always preferable to posterior gastro-enterostomy. When he cannot perform partial excision, owing to fixation of the posterior wall of the stomach, he performs either a "loop" or "no loop" anterior gastro-enterostomy. He has found jejunostomy to be unsatisfactory, owing to the liability to leakage.

(86) No Dressings for Septic Wounds.

F. G. Dyas queries the treatment of suppurating areas by sterile or antiseptic dressings, dry or moist (*Journ. Amer. Med. Assoc.*, May 29, 1915). He points out that, by forming a "pus bath," dressings macerate and devitalize the tissues, and foster the development of pathogenic bacteria. He exposes septic wounds to the open air, and, if possible, to sunshine. The part is covered by a cradle, over which is placed mosquito netting, to keep off dust and flies. He states that heat and moisture are necessary for the growth and propagation of practically all pathogenic bacteria. He mentions that, in the case of burns, the use of this treatment is already established. In the open-air method for treating wounds, sloughing tissues are rapidly

dissociated, and foul discharges are dried up, so that the absorption of toxic material is greatly diminished. Furthermore, the granulations are left free to grow and cover in the affected area, and are not torn off daily with the dressings.

(87) Reflex Spasms.

Charles D. Aaron (*Journ. Amer. Med. Assoc.*, May 29, 1915) reports a case of chronic appendicitis, in which, by means of an examination with the Röntgen rays, he has observed pylorospasm, induced by pressure over the region of the appendix. He also notes that pressure in this region produces reflex pain in the epigastrium.

GYNÆCOLOGY AND OBSTETRICS.

(88) Unilocular Ovarian Cyst.

A. N. Edmonds reports a case of large unilocular ovarian cyst (*Journ. Amer. Med. Assoc.*, July 10, 1915). The patient had noted the presence of the tumour for four or five years. There had been great discomfort, but no pain. The patient was admitted to hospital for a severe attack of diarrhœa. She was addicted to taking opium. On measurement, the patient was found to be 4 feet 10 inches tall, and 5 feet 8½ inches in circumference at the waist. She could only walk with assistance. An incision was made through the skin and peritoneum, in the mid-line, through which the cyst was tapped. Over 100 lbs. of dark brown fluid was removed on tapping. The incision was then extended, and the cyst was found bound by adhesions to the abdominal wall, intestines and omentum. The pelvic organs, including the bladder, formed a solid mass with the pedicle. The bladder was carefully dissected away from the mass, but in spite of the utmost precautions, the bladder was entered. After the bladder had been dissected free, the pedicle was clamped and the cyst, with both the ovaries and uterus, removed. The cyst and its contents weighed 140 lbs. Recovery was uninterrupted. Six months after the operation the patient continued in good health.

(89) Hypertrophies of the Endometrium.

W. S. Gardner (*Journ. Amer. Med. Assoc.*, May 29, 1915) has studied the pathological conditions of the endometrium, which are not produced by bacterial infection. He finds a number of types that may be confused with each other, with the normal endometrium and with adenocarcinoma of the body of the uterus. The premenstrual endometrium is the normal form most frequently mistaken for some pathological state. He discusses the types of endometrium found with extra-uterine pregnancy, with ovarian lesions, with retro-displacements, with fibroids, and with malignant growths. He also describes a glandular and interstitial hypertrophy of the endometrium. Non-malignant over-growths of the endometrium are comparatively common. In some instances the whole endometrium is thickened, in others there are found pedunculated masses of greater or less extent. They occur most frequently between the ages of 40 and 50, but are also found at periods at life both earlier and later than this. In extra-uterine pregnancy, the stroma cells are large, and approach in appearance the decidual cells. The glands are very much dilated and irregular in outline. The epithelial lining of the gland is swollen, and projects into the calibre of the glands, producing an exaggerated, saw-toothed appearance. These changes are the continuation of the same action in the endometrium that produces the premenstrual type. In cases with ovarian lesions, numerous dilated glands occupy the whole depth of the endometrium. Their outlines are fairly regular. In the lumina of the glands blood and much broken-down epithelium accumulates. The epithelial lining of the glands is in a single layer and somewhat enlarged. The stroma cells are normal in size, but decreased in number. There is a slight increase in the small round cells. The endometrium of this type is easily distinguished from the normal pre-menstrual type, by the greater regularity of the outline of the gland and the apparent thinning out of the stroma. In glandular hypertrophy there is a great increase in the number of glands associated with a moderate increase in the stroma. The glands are lined with a single layer of epithelial cells, which have large nuclei and contain much chromatin. Not infrequently it is difficult to separate this condition from adeno-carcinoma of the body of the uterus. The more important points of distinction are the uniformity of the epithelial cells in the glands of an adenoma. In adeno-carcinoma, the epithelial cells lining the glandular spaces are irregular, both in size and in content of chromatin. Interstitial hypertrophy of the endometrium much more commonly involves the whole endometrium than does the glandular form. It is characterized by a great increase in the stroma, and by very little, if any, increase in the number of glands. The glands may be narrow or in some cases much dilated. This type of hypertrophy is frequently associated with marked hypertrophy of the uterine wall. In retro-displacements, the appearance of the endometrium varies with the period of the menstrual cycle, but shows an almost constant increase, above the normal, of small round cells. The increase is in the scattered cells, and not in the defined groups. These changes are apparently due to interference with the circulation consequent on the position of the uterus. When fibroids are present, no characteristic appearance of the endometrium can be expected. All types may be found, and none of them bear any direct relation to uterine hæmorrhage.

(90) Ovarian Transplantation.

C. C. Guthrie and M. E. Lee have reported the successful transplantation of the ovaries of puppies (*Journ. Amer. Med. Assoc.*, May 29, 1915). The ovaries of two sister puppies, three months old, were removed in each case and transplanted into the other animal. At this time the organs measured 6 mm. in length. The animals were operated on simultaneously. The ovaries, after being separated from their own pedicles, were fastened to the pedicle of the former ovary. The animals made an uneventful recovery. One animal was unfortunately lost. The second animal was killed 18 months after operation. There were slight peritoneal adhesions between the intestines and the anterior wall of the abdominal cavity on the line of the incision. The right ovary appeared normal, and was much larger than at the time of transplantation. The left ovary was represented by a cyst-like mass, the size of a navy bean. Histological examination of the right ovary revealed abundant normal histological elements, including recently-formed corpora lutea. The left ovary had undergone complete colloidal degeneration. Unfortunately, no attempt was made to determine the possibility of the occurrence of pregnancy.

(91) Infant Mortality Due to Labour.

C. S. Bacon (*Journ. Amer. Med. Assoc.*, 1915) discusses the intra-partum mortality in the United States. In the first place he examines the statistics of the infant mortality due to labour. No complete set of figures for the whole of the United States is available, but, assuming the population of the whole country to be 100,000,000, and calculating the number of still-births at the same rate as for the districts in which the rate of mortality is known, there are 120,000 still-births annually in the United States. In addition, some 45,000 deaths occur among infants during the first week of life. Dealing with the causes of mortality, he finds that 24,000 deaths are due to prolapse of the cord, to face and brow presentations, and to breech presentations. Utilizing the statistics obtained at institutions in Illinois and Chicago, he finds that a 15% fœtal mortality occurs for all cases involving operation. Miscellaneous causes, as placenta prævia, ruptured uterus, and toxæmia, account for 15% of deaths. The next important cause of infant mortality during childbirth is pathological uterine contractions. These occur in about one quarter of the cases in which the child is born dead. He considers that this is one of the most frequent preventible causes of death of the child, and is of opinion that greater care should be taken to control the contraction of the uterus. When excessively powerful contractions are observed, morphine and hypnotics should be used to diminish the force of the muscular contractions.

EPIDEMIC CEREBRO-SPINAL FEVER.

The recent occurrence of cases of this disease, not only in military camps in Australia, but also to some extent amongst the civilian population, is not a new feature in Australian epidemiological history. As far back as 1873 three cases are recorded in the *New South Wales Medical Gazette*, by Dr. N. MacLaurin and Dr. Milford, which were probably instances of this affection. From 1882 onward cases of the disease have from time to time been reported in Australian Medical Journals, details of which will be found in the Fourth Report of the Microbiological Laboratory of the Department of Public Health for the year 1913, included in the report of the Director-General of Public Health for that year. It may here be mentioned that those interested in this disease who are desirous of obtaining copies of this report may obtain such on application to the Department of Public Health, Sydney.

Whilst annually during recent years isolated cases of cerebro-spinal fever have been reported in the Journals, and a small number of deaths has been attributed to this disease, on one or two occasions the number of cases occurring warrant the title of small epidemics. This was undoubtedly the case between July, 1900, and February, 1901, in Sydney, and at Port Pirie in South Australia in 1901. The returns of the Medical Officer of Health for Sydney show further the following deaths attributed to cerebro-spinal fever from the year 1904 to the year 1914:—1904, 18 cases; 1905, 8 cases; 1906, 9 cases; 1907, 15 cases; 1908, 15 cases; 1909, 13 cases; 1910, 11 cases; 1911, 11 cases; 1912, 9 cases; 1913, 15 cases, and 1914, 15 cases. The information thus available as to Sydney probably has a reflex in the other States of Australia, although it must be borne in mind that probably comparatively few of the cases diagnosed as this disease have been bacteriologically proved to be of this nature. The fact remains, however, that some of these have been so proved. The occurrence therefore of small epidemics of the disease in the military camps of Australia does not necessarily lead to the conclusion that the disease has been introduced into Australia by carrier cases from the foci of infection recently reported in other parts of the world. Though such a possibility cannot by any means be excluded, the almost simultaneous appearance of the disease in New Zealand and in several centres in Australia lends some support to the opinion that the infection, always to some extent present amongst us, has for some unknown reason taken on a mild epidemic prevalence. Considering the number of men crowded together in camps, their propinquity presumably offering facilities for the transmission of the infecting organisms from cases or from carriers to other individuals, it is a feature of great interest and importance that the actual number of cases developing has been relatively small. So far Victoria seems to be suffering most, the cases occurring in New South Wales being fewer and scattered. Since the beginning of March fourteen cases of the disease have been reported, with seven deaths, though most of these are cases which have occurred since the end of May. Though unmistakable cases of the disease showing signs of meningeal involvement can be readily recognized, fulminant cases of a toxic nature, and mild forms of the complaint with little or no meningeal involvement, as well as probably a considerable number of unrecognized cases showing only symptoms of sore throat and a mild toxic condition, may not be so clearly recognized, or escape observation altogether. In the fulminant cases the patient is rapidly overwhelmed with a profound toxic condition, under which he rapidly sinks in a few hours, attention to the nature of the case being directed in those cases which show the characteristic petechial rash. So rapid is the progress that signs of meningeal involvement may have little time to manifest themselves.

In another atypical form there would seem to be slight evidence of meningeal involvement, although lumbar puncture may reveal an excess of cerebro-spinal fluid, and there is definite slight stiffness of the neck, other features being involvement of some of the joints. In some of the cases the conjunctiva is, at an early stage, deeply congested, whilst a purulent infiltration of the eye may occur in fatal cases of meningitis.

As far as the evidence at present allows an expression of opinion to be formed, the cases occurring show no particular reference to each other, being widely distributed amongst the camp and civil population. That there must be some indirect connexion is obvious, and it would also seem perfectly clear that of those harbouring the *Meningococcus*, only a small number eventually develop the disease. This is a natural corollary, since otherwise the complaint would obviously die out. It remains yet to be seen, however, whether meningococcal infections behave as do pneumococcal ones. As regards pneumococcal infections it may be said that almost every individual from time to time must harbour this organism, but relatively very few develop lobar pneumonia, pneumococcal meningitis, or other evidence of aggressive action on the part of this organism. Why at times an increased incidence of lobar pneumonia should be prevalent, is one of the problems yet to be solved in epidemiology. Increased incidence seems associated with fatiguing work, followed by undue exposure, and associated with certain climatic conditions. Whether the *Meningococcus* behaves after the fashion of the *Pneumococcus* remains to be seen, though the evidence would indicate that the conditions necessary are not quite parallel.

Unfortunately, the search for meningococcal carriers is a somewhat tedious affair, requiring large amounts of specially prepared media, so that large numbers of individuals cannot be examined in a rapid manner as in the detection of diphtheria carrier cases. Efforts are, however, being made to detect carrier cases amongst the entourage of actual cases of disease, as well as amongst other individuals showing evidence of sore throat and mild toxic infection, who, as far as known, have not been associated with persons developing the disease. Though a great measure of success cannot be expected to attend work along these lines, this field of operations is, nevertheless, at any rate of some importance in limiting the possible spread of the disease. The approach of warmer summer weather should also tend to diminish the spread.

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British Medical Association News.

SCIENTIFIC.

A clinical meeting of the New South Wales Branch was held at the B.M.A. Building, 30-34 Elizabeth Street, Sydney, on August 13, 1915. The President of the Branch (Dr. G. Armstrong) took the chair.

Dr. A. E. Finckh read his paper on the treatment of abscess cavities on the lines of the physiological method for the treatment of wound infection laid down by Sir Almroth Wright (see page 191).

Dr. E. H. Binney was disappointed not to hear the results that had followed the experiments performed at the Sydney Hospital.

Dr. J. Flynn thought that it was only appropriate to pay a passing word of tribute to Sir Almroth Wright, since the foundations of his work had been laid in the physiological laboratory of the University of Sydney. He pointed out that it was a well-known fact, dating from the observations of Buchner, made 25 years ago, that blood had anti-bacterial properties. When blood was dialysed against water these properties were lost, but when blood was dialysed against saline solution the anti-bacterial properties were retained. Irrigation with antiseptics did not enable the antiseptic to reach the bacteria, which were situated in the walls of the abscess cavity. By stimulating the flow of the lymph to the walls of the cavity, anti-bacterial substances could reach the bacteria in the injured part. When an abscess was opened, fresh phagocytes were brought to the cavity of the abscess. He had tried this treatment successfully in one case.

Dr. R. Worrall wished to call attention to the similarity of the principle underlying this treatment to that which led to the employment of Bier's treatment by hyperæmia. He always carried a Stachner's ring in his pocket, and whenever he pricked his finger he put on the ring. He mentioned a recent personal experience, to point out how useful the encouragement of hyperæmia might be when employed

in early stages. Glycerine acted similarly to the hypertonic saline solution.

Dr. A. S. Vallack had, for four years, placed dressings moistened only with saline solution on septic wounds. He agreed with Dr. Finckh that foments underwent rapid cooling. He preferred to place a rubber bag containing hot water over the foment. He did not employ strong hypertonic salt solutions, but a solution containing 1½% of common salt. With hypo-tonic solutions of salt, the skin and tissues became softened by imbibition of water. He emphasized the part played by tryptic ferments in the process of infection of the tissues by various types of germs.

In reply, Dr. A. E. Finckh stated that the results had been excellent, as the signs of inflammation cleared up in a few hours.

Dr. W. T. Chenhall read his paper containing commentaries on (*a*) Jackson's membrane, (*b*) sigmoid adhesion, (*c*) cysto-adenoma of the ovary, and (*d*) extensive vesico-vaginal fistula (see page 192).

Dr. C. E. Corlette showed a man, aged 66, on whom he had performed an arthroplasty of the left elbow, twelve months ago. The operation was carried out some months after a comminuted fracture involving the elbow joint. The fracture had immobilized the joint. The patient suffered from severe pain. A radiograph of the injured part was handed around for inspection. At operation he had removed a fragment from the joint, cut away a part of the olecranon process and shaped the end of the humerus. He had separated the cut surfaces by inserting into the joint a flap formed from a piece of fatty fascia from the thigh. He drew attention to the excellent movement of the arm.

Dr. Worrall asked how such good movement was attained, and Dr. Vallack sought information as to which surface of the flap was in contact with the humerus.

Dr. Corlette explained that the part was massaged for some months. In reply to Dr. Vallack, he stated that the fascial surface was in contact with the humerus.

Dr. Corlette showed a man on whom he had performed a sub-astragaloid amputation. A cart had passed over the foot. Gangrene occurred, and the separation of the gangrenous portion occupied a long time. The only parts of the foot that remained were a portion of the heel and a flap on the outer side extending to the small toe. The patient could now walk freely, with a suitable boot, on the portion of the foot that remained. He could stamp the foot on the ground and work like an ordinary person.

Dr. E. H. Binney thought that the blood supply of the outer part of the foot accounted for the good result. In cases of talipes, surgeons had noted how much better the outer side of the foot was supplied with blood.

Dr. Corlette, in reply, stated that, in books, surgeons were advised to make their flaps from the inner side of the foot.

Dr. C. E. Corlette showed a man, aged 63, who had suffered from a malignant growth of the hepatic flexure of the colon. In April, 1914, the patient had almost died from hæmorrhage from the bowels. He had passed three chambers full of blood. A second slight hæmorrhage had occurred later. Previously, vague pains had been noted in the abdomen. An exploration had been made through a button-hole incision, when a mass was felt on the right side of the abdominal cavity. The incision was enlarged, and the colon drawn out from the wound. About 10 inches of the hepatic flexure of the colon were removed. The bowel was united by lateral anastomosis. Convalescence was prolonged, as broncho-pneumonia intervened. An umbilical hernia had occurred. Since the operation, the patient had increased three stones in weight. He weighed 10 stones 5 lbs. at the present time (twelve months after the operation). There was a ring cancer, with no constriction of the bowels. No enlarged glands had been found. He attributed his success to the fact that operation had been performed before intestinal obstruction had occurred. The hæmorrhage had, in his opinion, saved the patient's life, by drawing attention to his condition.

Dr. C. E. Corlette also showed a specimen of the pyloric orifice of the stomach, obtained from a man who had suffered from gastric symptoms. A bismuth meal had shown that the stomach contents were delayed at the orifice. An operation was performed, and the specimen exhibited removed. A small gland near the pylorus was also taken away. On opening the stomach he had found no ulceration of the surface. The growth was an adeno-carcinoma. The gland was not infected.

Dr. C. E. Corlette read notes on a case which had been under the care of Dr. A. J. Aspinall. He had prepared these notes at the request of Dr. Aspinall, who was away from the State on military service (see page 196).

Dr. E. H. Binney had a similar case, which had been in the ward at the same time as Dr. Aspinall's case. He thought that these cases required immediate abdominal operation. The surgeon could determine whether the urethra communicated with the abdominal cavity. He could also examine the position of the urinary bladder. In his experience, the majority of cases of rupture of the urethra were extra-peritoneal.

Dr. J. C. Windeyer showed a No. 8 gum elastic catheter, 11 inches long, removed from the abdominal cavity of a woman, and read notes on the case from which it was obtained (see page 197).

Dr. W. T. Chenhall related the history of a case which illustrated the recuperative powers of the peritoneum. He had removed a piece of gauze from an abscess cavity within the peritoneum. He had not been able to obtain any history as to how the pad of gauze reached the abdominal cavity.

Dr. G. Armstrong had seen a case in which a crochet needle six inches long has been passed into the retro-peritoneal space while the patient was in the erect posture. The uterus had been retro-flexed in this patient. At operation he had removed the crochet needle from the right iliac fossa.

Dr. H. G. Chapman demonstrated a method for the detection of lead in human urine. He employed a litre of urine for an exhaustive examination. The urine was concentrated on the water bath to 200 c.cm. and mixed with sufficient concentrated nitric acid to yield a 10% solution of nitric acid. A small porous, unglazed porcelain pot was placed in a beaker and the urine put in the beaker and pot. An electrode of platinum foil, with an area of 10 sq. cm. was placed in the pot, and an electrode of half the size was placed in the beaker, external to the pot. A current from three dry cells was passed through the fluid for twelve hours. The electrode within the pot was attached to the anode. The cells yielded a voltage of six volts, and the resistance of the circuit was 12 ohms. The current was therefore about one-half ampere. The lead was deposited on the anode. When deposition was complete the electrode was removed and the black deposit tested with iodine for the formation of the yellow iodide of lead. Some of the deposit was dissolved in a small amount of nitric acid, and treated with sulphuretted hydrogen for the formation of black sulphide of lead. The organic compounds of lead were oxidized by the nascent oxygen generated in the early stages of electrolysis by the chlorine set free by the current.

Dr. H. G. Chapman demonstrated the evolution of gas on the addition of solutions of sodium hypobromite to liquids containing protein. This demonstration showed the fallacy in testing for urea in fluids containing protein by means of this re-agent. He had received many specimens from Royal Prince Alfred Hospital in which the presence or absence of urine was of clinical importance. He thought that tests for sulphates were of value in the examination of these specimens. If the amount of fluid was sufficient, he made a quantitative determination of the amount of the sulphates present. Most of the fluids found in the human body contained only traces of sulphates. Urine contained, on the other hand, appreciable amounts of sulphates. It had recently been shown that the amount of nitrogen liberated from proteins by nitrous acid, which acted on similar groups to those acted on by sodium hypobromite, was equal to one-half that present in the lysin nuclei of the molecule.

MEDICO-POLITICAL.

A council meeting of the Victorian Branch of the British Medical Association was held in the Medical Society Hall on Thursday, August 12. Dr. Honman presided, and Drs. Todd, Armit, Robertson and Hone were present as visitors from other States.

The Secretary reported that, since the last report of the War Organization Committee was published, 95 additional

returns had come to hand, making a total of 550. Very satisfactory answers had been given to the questions, so that many names could be added to the previous list of men now available for military service, for hospital practice and university teaching.

The following were elected to vacancies on the Council: Dr. Frank Andrew, as Assistant Hon. Treasurer; Dr. J. Dunbar Hooper and Dr. S. V. Sewell, as Members of the Council.

Letters were received from the President and Secretary respectively of the Victorian Trained Nurses' Club and of the Royal Victorian Trained Nurses' Association, drawing attention to the proposal of the Defence Department to make use of nurses with six months' training only, and proposing that the civil hospitals release their third year trainees for Base Hospital and convalescent work, provided that this work be recognized by the R.V.T.N.A. as part of training for the certificate.

The Council adopted the recommendation of the subcommittee appointed to consider this matter: "That, in the event of an insufficient number of nurses being obtainable, third year trainees should be allowed to finish their training at the Base Hospital; but that a sufficient number of third year trainees should be retained at their training schools to ensure the proper nursing of their patients; and that the military authorities should be informed that the Council considers no nurse under two years' training should be employed in military hospitals."

Dr. Jones moved that the Defence Department apply to the Lunacy Department for nurses from mental hospitals to fill up vacancies, and to enable nurses to do a year's training in the general hospitals, in order to qualify for a certificate; provided always that the nurses be recommended by the head of the department.

With regard to the scheme of the Acting Director-General of Medical Services for the treatment of convalescent soldiers, the Council decided to act on the same lines as the New South Wales Branch. A motion similar to that passed by the New South Wales Branch will be submitted to a special meeting of members for confirmation on Wednesday, August 18, 1915.

At the request of the Principal Medical Officer for Victoria, the President, Dr. Boyd and Professor Berry were appointed to assist him in the arduous work in which he is engaged.

Complaints have been made by the Minister of Health against the Board of Management of the Infectious Diseases Hospital, Fairfield. The Council directed that a letter should be sent to the Minister, pointing out that two members of the Council of the B.M.A. had been appointed, at his request, to represent the Government, and had so far not been consulted.

The Council passed a resolution that all cases of cerebrospinal meningitis should be treated at one hospital. A letter was sent to the Minister for Defence, asking him to call a conference of all concerned, to hear the views of the members of the medical profession.

A special meeting of the Victorian Branch of the British Medical Association was held at the Medical Society Hall on August 18, 1915, to consider the scheme for medical attendance, in country and other districts where no military hospital was established, upon soldiers who had returned from active service after discharge from hospital.

Dr. Honman presided, and explained that the original scheme, as submitted by the Director-General of Medical Services, was far from complete, so that many objections could be brought against it. A wounded soldier residing within two miles of the consulting rooms of the medical practitioner would receive medical attention, but a man who lived three miles away would naturally ask whether he also should not be attended. Further, the scheme did not provide for any accident that might arise in the case of a soldier who had not yet been discharged; he would require treatment, and so also would the man who got pneumonia. A circular accompanying the scheme said that the men would be in better health than those who were discharged from public hospitals, and that 25s. was considered a fair rate. This fee of 25s. included medicine, attendance and dressings. He pointed out that it was not the place of medical men to provide medicine and dressings. A fee of £1 was very little indeed, and it was not too much to ask the medical men to forego the fee and attend the soldiers for purely patriotic motives. The men had been through it for us. Why should we not be glad to do the work, willingly and freely, for them without pay? The most serious objection was that if payment was accepted, the medical men would become public servants of the Commonwealth. Dr. Honman quoted from a reliable source the opinion that the acceptance of payment would, *ipso facto*, make members officers of the Defence Department, to be called on to do service at any moment, without recognition of their civil rights. The Director-General of Medical Services might promise to the contrary, but he could not bind his successor. A further consideration looked to the future; after the war we might have the nationalization of medicine, when this rate of payment might be accepted as a standard. There was a possibility, and this rate would undoubtedly form a precedent. This scheme would not apply to districts where military hospitals were established. It did not contemplate the fact that hospitals would be established all over the country; by force of circumstances they had been established at Ballarat, Bendigo, Geelong and other centres. Taking all these circumstances into consideration, and witnessing the spirit displayed in Sydney, the Council of the Victorian Branch, after gaining the opinions of the men in the country districts, and after considering the matter thoroughly had decided to accept the scheme, with the following condition: "That no payment should be received, provided that attendance was necessary for injury received or illness incurred during military service."

The matter was in the hands of the meeting for their determination.

Dr. Arthur Andrew pointed out that the matter concerned country practitioners alone, that the terms were not explicit, and that the men were unable to say what they might be called upon to do. Was the medical man in attendance to judge whether the man was ill enough to be returned to the public hospital?

Dr. F. L. Davies stated that it was the duty of the Government to provide for attendance on all returned wounded soldiers. Were we asking the country doctors to render their services free, in order to save the Government from monetary expense? Again, should not the men in the cities set the example before recommending it to the country practitioners? No one examined recruits free or attended at the base hospitals for nothing. The argument of the President about nationalization need not be entertained for one moment.

Dr. M. F. Kelly (Ballarat) pointed out that, in the event of payment being accepted, the men would be under the heel of the Defence Department. His experience was that the Department had no respect for medical men in the country. They had been called away at a moment's notice, without respect to their civil obligations; in fact, the administration of the department was simply shocking. It was without any system whatever. Speaking on behalf of his division, he preferred that the services be rendered for nothing, so that members should not be at the beck and call of the Defence Department.

The President said that, by the same good authority as he had quoted before, he was authorized to state that they would undoubtedly become, *ipso facto*, members of the A.A.M.C. if they accepted any payment whatever.

Dr. Kenny pointed out that Dr. Davies, in raising the question of Town *v.* Country, was arguing on a false analogy. The services were such as only country practitioners would be called upon to render, and the cases that they would see would have already been treated at the base hospitals before coming to the country practitioners for attendance. So many men were in the A.M.C., and so few outside, that they were urged to remain outside, in order that they could be in a position to speak plainly without having to send their ideas through long, circumlocutory channels. It was for the welfare of the civil practitioners that they should not come under this routine.

Dr. Honman, referring to Dr. Davies' remarks, pointed out that the men discharged from the base hospitals were

convalescent, and that the medical attendants at the base hospitals were on the medical reserve, and were taken away from their busy civil practices, whether they liked it or not, and were kept busily employed for the whole of the half day for the munificent sum of 15s. It was not fair to point the finger at them and say "You are receiving payment, yet are asking country members to take nothing." The country practitioner in the same hours might be called upon to attend one patient only, and that patient in his consulting room. The question was whether we were to advise our members to take a payment of 20s. and so render themselves liable to be sent away to the various hospitals for a remuneration of 15s. per day. Ballarat, Bendigo and Geelong, where the matter had been fully considered, preferred that the attendance should be without charge. The same applied to Western Australia.

Dr. W. R. Boyd moved that the resolution in precisely similar terms to that passed by Sydney Branch, and which was then being submitted by the Council of the Victorian Branch for the approval of its members, should be approved. In speaking to the resolution, he said that the Branch might be trusted not to stand in the way of its members. The Branch would assist the Defence Department at this great crisis. The work should be done in the ordinary military way by appointing men to attend the wounded in the country districts. The original proposal could not be accepted, because there was a strong objection to the whole of the members of the profession becoming members of the Army Medical Reserve, and so "having their teeth drawn." Another objection was the amount; 25s. for attendance, medicine and dressings appeared to him to be ridiculous. The consensus of opinion, so far as the Council could ascertain it, was that men would prefer to do the work for nothing rather than accept a small sum and place themselves under the heel of the Department. Some of the Council felt some diffidence in recommending the men to do the services for nothing, because of the fact that some of the men were paid for attendance upon the wounded. But the analogy drawn by Dr. Davies was not quite fair. The men doing work at base hospitals were men who could ill afford the time for the large amount of work allotted to them, whereas in the country all military work would be distributed, so that there would be no great increase in the amount of work entailed upon any one man. He moved that "This meeting approves of the resolution adopted by the Council."

Dr. V. J. E. Z. Woinarski, in seconding the motion, said that members of the North Melbourne Division were unanimous in refusing payment.

Dr. Robertson asked why it was that medical men were asked to give their services for nothing, whereas a storekeeper was not asked to provide a wounded soldier with butter at 1s. per lb., or perhaps nothing. If the Government were liable to provide medical attention for wounded soldiers, why should medical men be asked to do it for nothing?

Dr. Kennedy, of Geelong, pointed out that in the districts around Geelong, both farms and stations had been denuded of hands who had enlisted in the early stages of the war, and had suffered severely in action. He considered that medical men in that district would find that there would be a lot of work for them to do.

Dr. Kelly suggested that there should be an addendum to the resolution, "That drugs and dressings should not be supplied by medical men." This addendum was accepted by the mover and seconder, and became part of the motion.

Dr. Davies moved as an amendment, "That in any future base hospital that might be established, all medical men should take on the work for nothing."

Dr. T. E. L. Lambert seconded it.

The amendment, being put, was lost.

Dr. A. Andrew thought that the whole scheme was too loose. The country practitioner would be unable to make any altered terms without making himself objectionable. The whole scheme was undefined, and should be made up into concise paragraphs.

The motion was then put and carried, with four dissentients.

An informal meeting of the Council was held at the conclusion of the special meeting.

Dr. Honman explained that Mr. Glynn, M.H.R., had waited on him that day, and desired that the Council should nominate three members to act with the War Advisory Committee of the Federal Parliament, with regard to surgical matters, and the after results of the war. They would provide advice on such matters as the loss of arms and legs, and assist to place men in a position to earn a living. Matters of the supply of artificial limbs and attention to men who had lost the right arm or both eyes or similar matters came within the purview of this committee. The Parliamentary Committee consisted of Messrs. Glynn, Watt and Webster.

This request was important, in that it was a recognition of the claims of the British Medical Association. He asked for any information or instruction. The Committee would meet the following day at 11 o'clock.

Dr. Kenny pointed out that such a committee had been at work in London and France.

Dr. McAdam pointed out that in Germany they had a very large scheme at the present moment in actual operation.

It was moved by Dr. Boyd and seconded by Dr. Scott "That we accept Mr. Glynn's invitation to meet him on the following day, and that the President, Drs. McAdam and Kenny be the representatives of the Council."

The following have been elected members of the New South Wales Branch:—

Dr. Neville Griffiths, Balmain.
Dr. J. Garland Skeet, Sydney.
Dr. W. A. Bowie, Scarborough.
Dr. W. J. McCristal, Burrenjuck.

Medical Societies.

THE OPHTHALMOLOGICAL SOCIETY OF NEW SOUTH WALES.

The annual general meeting of the Ophthalmological Society of New South Wales was held at the Sydney Hospital on August 4, 1915.

Dr. R. H. Jones (President) was in the chair.

The Secretary presented the fifth annual report, in the following words:—

> The Council has pleasure in presenting its fifth annual report. The Society has had another successful year, the usual meetings having been held, at which many interesting papers have been read and cases shown, leading to valuable discussions.
>
> The attendance of members has been good, but the Council regrets that a proportion of the members do not more actively support the Society.
>
> It is a matter for congratulation that the success of this Society devoted to a special branch of medicine has led the Council of the British Medical Association, New South Wales Branch, to formulate rules for the promotion of such sub-sections of the B.M.A., in the hope that men interested in special work, such as rhinology, pathology, gynæcology, etc., will follow our example.
>
> Only one new member was elected during the year, this being the only addition to the ranks of those practising ophthalmology in the State.
>
> Many of our members have offered their services to the nation as ophthalmic surgeons during the present lamentable war, but so far none have been accepted from this State.

The Treasurer presented the balance-sheet, which showed a slightly greater surplus than that of the preceding year in the balance carried forward.

The following office-bearers were elected:—

President: Dr. J. C. Halliday.
Vice-President: Dr. Cyril Shepherd.
Treasurer: Dr. E. A. D'Ombrain.
Secretary: Dr. Guy Antill Pockley.
Members of Council: Dr. E. Temple Smith and Dr. E. Brearley.

A very interesting address and review of the progress of ophthalmology during the past year was delivered by the out-going President, Dr. R. H. Jones.

A vote of thanks to Dr. Jones was proposed by Dr. D'Ombrain, and carried unanimously.

Some notes were read by Dr. Halliday on cases shown at the last quarterly meeting.

THE PATHOLOGICAL CLUB.

The members of the Pathological Club assembled at the Bureau of Microbiology on Wednesday evening, August 11, 1915. Dr. H. G. Chapman took the chair at 8 p.m. The sum of £10 was voted from the accumulated funds of the Club for the Relief of the Belgian Doctors.

Dr. J. B. Cleland showed sections of a pituitary gland, with features suggestive of tuberculosis. The following notes were supplied by Dr. A. E. Palmer on the man from whom the pituitary body was obtained. A.B., æt. 41, born in Calcutta, had complained of ill-health for some time. He was heard to cry out, and was found, in bed, struggling and frothing at the mouth. He was taken to Sydney Hospital, where he was admitted in an unconscious state. He died three hours later. At post-mortem examination his height was ascertained to be 6 feet 1½ inches; his features were coarse, his hands large and long and the bones generally large. The mitral orifice of the heart was dilated, and two ounces of liquid was removed from the pericardial cavity. Scarring was noted at the apices of the lungs, which were œdematous and engorged. Areas of patchy congestion were observed in the walls of the stomach and small intestines. The kidneys were red, swollen and congested. The dura mater was thick and opaque. The infundibulum was enlarged, and was removed for examination. The contents of the organs were submitted to the Government Analyst, who reported them to be free from inorganic and organic poisons. Sections of the infundibulum showed masses of cellular infiltration containing giant cells. Caseous patches were present. No tubercle bacilli could be found by the Ziehl-Nielsen method of staining. Dr. Cleland thought that the condition was tubercular, although it might possibly have been due to syphilis.

In the discussion, Dr. S. A. Dodd pointed out that tubercle bacilli not infrequently lost their waxy covering, and thus their acid-fast staining characters during life and during the preservation of material. Such bacilli stained positively by Gram's method.

Dr. J. B. Cleland also showed a section of a lung containing pollen grains. The section showed red hepatization, due to staphylococcal infection. The specimen was taken from a child who died suddenly some years ago, when plague was prevalent. Portions of the lung were removed at post-mortem examination, and bacteriological examination showed that the pneumonia was due to cocci. Certain peculiar bodies were observed in the sections of the lung. It was at first thought that these were the ova of parasites, and the sections were sent for examination to Dr. Leiper, who reported that they were certainly not the ova of worms. Further investigation revealed that these bodies were pollen grains, although the plant from which the pollen was derived could not be identified.

Dr. W. F. Litchfield read notes on the post-mortem examination of the body of a child, æt. 2½ years, who was admitted to Royal Prince Alfred Hospital with a temperature of 105° F., and who died in a few hours. No notes of the previous condition of the child could be obtained. The post-mortem examination showed changes only in connexion with the duodenum and the liver. A condition of duodenitis, with enlarged follicles, was observed. A number of enlarged lymphatic glands were noted in the hilum of the liver. Multiple abscesses were scattered throughout the liver substance. The gall-bladder was distended with bile. No jaundice was present, and the contents of the bowels were stained with bile. Microscopically, sections of the duodenum revealed an increased proliferation of small cells, especially in connexion with the lymphatic follicles. No bacteriological examination had been made.

Dr. Bradley read notes on a large tumour removed from the appendical region of the abdomen. The tumour was obtained at operation from a patient suffering from acute abdominal symptoms. The mass which involved the bowel was removed at operation, and the divided ends of the bowels were united by sutures. The patient died. No post-mortem examination was allowed. On immediate examination, it was noted that the ileum was invaginated into the caecum, which was much swollen and congested. Later when the specimen had been preserved, it was disentangled. It was found that eight inches of ileum had passed through the ileo-caecal valve into the caecum. About six inches from the valve in the ileum an ulcer was present in an enlarged Peyer's patch. The ulcer had the appearances of the typical ulcer of enteric fever. Cultures from the bowel yielded many organisms, including a para-typhoid bacillus. From a lymph gland, removed along with the mass, a pure culture of the typhoid bacillus had been obtained. Dr. Bradley also read notes on a tumour removed from a woman aged 65. The tumour had been present in the axilla, beneath the skin, which had been moveable freely over it. The lymphatic paths of the forearm and arm had been swollen. The mass was scraped from the axilla, and subjected to microscopical examination. The material showed a typical squamous-celled epithelioma in a lymphatic gland. Subsequent careful examination of the arm had failed to show any lesion. The breasts also appeared to be quite normal.

During the discussion, Dr. Cleland mentioned that he had seen a similar case in which a cyst had been removed from the axilla. Sections of the cyst showed that it was a squamous-celled epithelioma.

Public Health.

INFECTIVE DISEASES.

The Official Bulletin issued by the Federal Quarantine Bureau and dated August 13, 1915, contains the following information:—

No vessels were quarantined.

Plague.

Two cases were reported at Rio-de-Janeiro between May 8 and 29, 1915. One case was reported during the week ending June 12, 1915, from Ceylon. From May 21 to July 1, 1915, 80 cases, with 34 deaths, occurred in Egypt. In Hong Kong 54 cases and 52 deaths had been reported for the period May 23 to June 10, 1915. In India, between May 23 and July 3, 1915, 19,034 cases occurred, with 16,534 deaths. There were 207 cases, with 199 deaths, in Java from May 21 to July 1, 1915. At Mauritius one case was reported on June 14, 1915. No further cases have been notified from New Caledonia. No cases have appeared in the Philippine Islands. The last case occurred on September 12, 1914. No further cases are reported from South Africa. In the Straits Settlements one fatal case occurred during the month of July, 1915.

Cholera.

Four additional cases and five deaths have been reported from the Dutch East Indies. In the Philippine Islands two cases and one death were notified for the period from May 15 to July 17, 1915. One fatal case was reported on June 9, 1915, from the Straits Settlements.

Small-pox.

No further reports have been received from the Dutch East Indies. No further cases have been reported from the Philippine Islands and Straits Settlements.

THE HEALTH OF NEW SOUTH WALES.

The following notifications have been received by the Department of Public Health, New South Wales, for the fortnight ending August 16, 1915:—

	Metropolitan Combined Districts.		Hunter River Combined Districts.		Remainder of State.		Total.	
	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.
Enteric Fever	23	2	4	0	16	1	43	3
Scarlatina	156	2	10	0	110	1	276	3
Diphtheria	85	3	16	0	92	1	193	4
Ant'r Poliomyelitis	2	0	0	0	0	0	2	0
Malaria	1	0	0	0	2	0	3	0

INFECTIVE DISEASES IN WESTERN AUSTRALIA.

The following notifications have been received by the Department of Public Health, Western Australia, during the fortnight ending July 31, 1915:—

	Enteric Fever. Cases.	Diphtheria. Cases.	Pulmonary Tuber'sis. Cases.	Erysipelas. Cases.
Cottesloe Beach	1	—	—	—
Maylands	—	—	1	—
Subiaco	1	1	—	—
Perth	—	5	4	—
Perth North	1	—	—	—
Perth South	—	—	1	—
Belmont	—	—	1	—
Queen's Park	—	—	1	—
Kalgoorlie	—	8	1	—
Lion Mill	—	—	1	—
Narrogin	—	2	—	—
Greenbushes	—	1	—	—
Darlington	—	—	1	—
Midland Junction	—	—	—	1
Boulder	—	1	—	—
Merredin	1	—	—	—
Total	4	18	11	1

The following notifications have been received by the Department of Public Health, Western Australia, during the week ending August 7, 1915:—

	Diphtheria. Cases.	Enteric Fever. Cases.	Pulmonary Tub'c'losis. Cases.	Erysipelas. Cases.
Perth	6	1	2	0
Maylands	0	0	1	0
Midland Junction	1	0	0	0
Kalgoorlie	3	0	1	0
Boulder	3	0	0	0
Coolgardie	2	0	0	0
Gosnells	1	0	0	0
Greenbushes	0	0	0	1
Dalwallinn	0	0	0	1
Wagin	0	1	0	0
Totals	16	2	4	2

INFECTIVE DISEASES IN HOBART.

The following notifications have been received by the Health Department of Hobart for the month ending July 31, 1915:—

	Cases.
Enteric Fever	3
Diphtheria	6
Scarlatina	3
Puerperal Fever	2
Varicella	3
Anterior Poliomyelitis	1
Pulmonary or Laryngeal Tuberculosis	7
Total	25

INFECTIVE DISEASES IN QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the week ending August 7, 1915:—

Diseases.	No. of Cases Reported.
Diphtheria	37
Varicella	20
Pulmonary Tuberculosis	14
Erysipelas	5
Puerperal Fever	2
Enteric Fever	1
Scarlatina	1
Anterior Poliomyelitis	1
Cerebro-Spinal Meningitis	1
Total	82

The following notifications have been received by the Department of Public Health, Queensland, during the week ending August 14, 1915:—

Disease.	No. of Cases
Diphtheria	25
Varicella	25
Enteric Fever	9
Pulmonary Tuberculosis	9
Erysipelas	5
Scarlatina	4
Puerperal Fever	1
Anterior Poliomyelitis	1
Cerebro-Spinal Meningitis	1
Total	80

THE HEALTH OF VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, during the week ending August 19, 1915:—

	Metropolitan. Cs.	Dths.	Rest of State. Cs.	Dths.	Total. Cs.	Dths.
Diphtheria	61	5	29	0	90	5
Scarlatina	6	0	15	1	21	1
Enteric Fever	0	2	1	0	1	2
Pulmonary Tuberculosis	15	9	5	5	20	15

INFECTIVE DISEASES IN VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, during the week ending August 8, 1915:—

	Metropolitan. Cs.	Dths.	Rest of State. Cs.	Dths.	Totals. Cs.	Dths.
Diphtheria	45	2	23	1	68	3
Scarlatina	4	0	10	0	14	0
Pulmonary Tuberculosis	22	5	7	5	29	10

SMALL-POX IN NEW SOUTH WALES.

The following cases of small-pox have been reported to the Department of Public Health, New South Wales, during the week ending August 15, 1915:—

Country	cases.
Newcastle	3

The following case of small-pox has been reported to the Department of Public Health, New South Wales, during the week ending August 22, 1915:—

	Cases.
Country—	
Newcastle District	1

HEALTH OF THE METROPOLIS OF SYDNEY.

The mortality return for July, 1915, as supplied by the Government Statistician, shows that 780 deaths occurred in the metropolis, including 43 deaths of individuals previously resident outside the metropolis, and deaths classified as taking place in the islands and shipping in the harbour.

Thus, calculating on an estimated population of 752,500, the annual death-rate for the month works out at 12.44 per 1,000 of the population.

Deducting the deaths of persons non-residents of the metropolis occurring at the mental hospitals of Leichhardt and Hunter's Hill (Callan Park and Gladesville), and adding the deaths of persons residents of the metropolis occurring at the benevolent asylums, mental hospitals and consumptive sanatoria situated outside the metropolis, the number of deaths was 754, giving a corrected death-rate of 12.02 per 1,000.

Among children under one year of age, 113 deaths were recorded for the metropolis.

There were 1,844 births during the month, giving a satisfactory rate of 29.40 per 1,000 of the population, being 2% above the average for July of the previous five years. The infantile mortality rate was 62 per 1,000 births, which is

most gratifying, being 27% below the average for July of the previous five years.

Infectious diseases were responsible for 55 deaths, of which 21 were due to measles, 6 to scarlet fever, 4 to influenza, 12 to diphtheria, 8 to typhoid fever, 1 to erysipelas, and 3 to puerperal fever.

Diarrhœal diseases were credited with 20 deaths, phthisis caused 57 deaths, cerebral hæmorrhage 27, cancer 43, prematurity 44, senility 34, bronchitis 33, pneumonia 73, Bright's disease 47, and diseases of the heart and blood vessels 111.

Compared with the average in July for the previous five years, there were increases in the number of deaths from epidemic diseases, pulmonary diseases, and disease of the heart, with decreases in diarrhœal diseases, cancer, phthisis and cerebral hæmorrhage.

Thirty-nine cases of typhoid fever, 205 of diphtheria, 352 of scarlet fever, and 3 cases of malaria were notified during the month of July.

Twenty-six cases of phthisis (consumption of the lungs and consumption of the throat) were notified during July under the City Council's by-laws, and 24 premises were disinfected by the Councils' trained staff after the deaths or removal of the patients.

(Signed) F. M. SUCKLING,
Acting Medical Officer of Health.

University Intelligence.

ENLISTMENT OF UNIVERSITY STUDENTS IN THE AUSTRALIAN IMPERIAL FORCES.

The Commandant of the 2nd Military District has issued the following instructions in regard to the enlistment of university students:—

All undergraduates of universities who have enlisted in the Australian Imperial Force and whose final examination for degrees will take place shortly, are, on application by them, to be granted without pay the leave necessary to enable them to sit for such examination, provided that such examinations are held within a reasonable time, and not just on the eve of the departure of a transport on which the unit or reinforcement to which the student is attached will embark for active service.

Students in engineering, chemical and physical science and veterinary science, who have enlisted and who are due to complete their final examinations this year, are, on application, to be granted leave without pay, to enable them to complete their studies and sit for their final examinations, provided that such leave will not in any case extend beyond the 31st December, 1915.

Students at the universities who are hurrying through their course in order to finish them prior to enlistment in the A.I.F., are to be granted a temporary exemption from military training under Part XII. of the Act to enable them to do so.

Should any such student subsequently enlist, he will not be called upon to make up the training missed.

Any who do not enlist will be required to do so.

UNIVERSITY OF SYDNEY.

The details of the National Service Movement initiated by the staff of the University of Sydney were laid before the Minister for Defence (Senator Pearce) by Sir Thomas Anderson Stuart and Professor T. W. E. David, C.M.G., on August 17, 1915. The deputation paid a special visit to Melbourne to put the scheme before the Minister, who promised to give the matter his careful consideration, and to announce his decision in a few days. The great majority of the members of the staff of the university have offered their gratuitous services to the Commonwealth in any capacity that may be desired.

UNIVERSITY OF TASMANIA.

The monthly meeting of the University Council was held on August 18, 1915. The Chancellor (The Honorable Tetley Gant, M.L.C.) presided.

A letter was received from Dr. J. Sprent, notifying his resignation from the Council, as he had been accepted for service at the front. It was decided unanimously to accept the resignation with regret. The Vice-Chancellor remarked that Dr. Sprent had rendered very valuable services to the university. Few members of council had worked more energetically and accomplished greater results.

The Registrar read a notification received through the Premier from the Under Secretary of State for the Colonies, stating that he was directed by Mr. Bonar Law, Secretary of State for the Colonies, to enclose a copy of an order of the King in Council, approving of draft letters patent for the required charter recognizing certain degrees conferred by the University of Tasmania.

Correspondence.

THE OCCURRENCE OF DENGUE IN QUEENSLAND.

Sir,—Dr. Breinl, in the first of his Stewart Lectures, published in your issue of June 12, referring to dengue, states: "According to records, it was introduced into Queensland as recently as 1894, probably much earlier, as I was informed that in 1879 a fever epidemic with hardly any mortality appeared in Townsville."

Hitherto I was unaware of the fact that no definite recognition of the disease had been made before 1894 in the medical press; in practice I have abundant evidence to show that I had no difficulty in diagnosing the disease nine years earlier. Indeed, had it not been for the numerous cases coming under my notice, in March, 1885, while paying what I first intended to be a visit to this goldfield, it is very doubtful whether I would have settled in the district.

With some practical experience of the diseases incidental to tropical West Africa and South America, I had no difficulty in the diagnosis, unless in regard to the exceptional mildness of dengue, its short duration, and the absence in the majority of cases of sequelæ worthy of medical attention.

Yours, etc.,
LEONARD REDMOND, M.D., M.Ch., L.S.A. (Lond.).
Charters Towers, Queensland,
August 13, 1915.

EPIDEMIC CEREBRO-SPINAL MENINGITIS.

Sir,—Recently I felt impelled to issue the following order to the staff of the large Government institution of which I have control. I made use of the two blunt Anglo-Saxon words purposely to arrest the attention of and to impress my lay readers.

"Re Epidemic of Cerebro-Spinal Meningitis.—As this very fatal disease is almost certainly conveyed from one person to another by lice and by no other channel, and as the disease is caused by the bite of a louse, I must order that the strictest precautions be taken by the whole staff to eradicate lice from the asylum.

"Systematic examination of the patients, their clothes, bed-linen and beds must be conducted until further notice, and report is to be made at once if any vermin be discovered. Neglect of this order may lead to many deaths amongst us."

My reasons for giving such directions were as follow:—

(1) That the present epidemic originated in Victoria, at the Seymour Military Camp, in winter time.

(2) That this camp was very inadequately supplied with water for bathing purposes, and the tents were overcrowded.

(3) That the soldiers, on the whole, are reluctant to take a daily cold shower in the open in winter, thus providing the soil on which pediculi corporis thrive so vigorously.

(4) Hundreds of the soldiers in any large camp in the vicinity of a populous town suffer from gonorrhœa.

(5) The fact that he has gonorrhœa is sedulously concealed by the soldier for many reasons, and, being mistreated, the case drags on indefinitely.

(6) The unwashed soldiers catch pediculi from one another, and the vermin breed apace in their congenial habitat. Other men, owing to the overcrowded tents, are infected, until the camp, generally, reeks with vermin. This, I regret to say, is no idle statement.

(7) The soldier with a gonorrhœal discharge becomes verminous, and the pediculi naturally harbour in the pubic region, which is fouled with the discharge, and they ingest myriads of gonococci.

(8) The arachnoid mater is purely a serous membrane, and, like the synovial membranes generally, is very prone to be affected by the gonococcus.

(9) Bacteriologically, the coccus most commonly found in cases of cerebro-spinal meningitis is indistinguishable from the gonococcus.

(10) The gonococcus-laden pediculi are conveyed by direct personal contact to other persons, and by their bite they implant the cocci in the lymph stream, and the germs are thence carried to the "point of election," or most receptive tissue (for the gonococcus), namely, the meninges of the brain and spinal cord, producing therein an intense inflammatory reaction, and signs also of general infection.

(11) The person infected by gonorrhœa in the ordinary way, it appears likely to me, has a certain immunity from secondary cutaneous infection by his pediculi.

(12) It is a well-authenticated fact, I need scarcely say, that typhus fever (another filth disease) is conveyed from one person to another by means of fleas infected with typhus germs. Malaria is also, of course, due to the bite of a germ-laden mosquito, and plague to the bite of a flea from a bubonic rat.

It is my firm conviction that cerebro-spinal meningitis is a true gonorrhœal inflammation of the arachnoid membrane of the brain and spinal cord, set up by the bites of infected pediculi corporis. To spray the nasal and buccal mucous membrane with eucalyptus or other antiseptic, as a preventive, is a puerile waste of time and material. One can find almost as many different cocci in the nose and throat of an apparently healthy person as there are days in the year.

From a consideration of the above facts the line of prophylactic treatment to be adopted to deal with this scourge is self-evident. Unhappily, so far as our knowledge at present avails, this is a disease for which prevention is the only cure.

Yours, etc.,

MORRIS GAMBLE.

Kew, Victoria,
August 17, 1915.

WHITE AUSTRALIA POLICY.

Sir,—Dr. Merrillees must pardon the delay that has arisen before replying to his letter, though it is difficult to take his letter seriously, as he persistently neglects to acquaint himself with the elementary data that would enable anyone to discuss intelligently the problem of Australian settlement.

Pigment.—Is it again necessary to affirm the importance of the physical properties of pigment? The question is simply one of physics and physiology.

Dr. Merrillees certainly does show his limitations in discussing the subject of pigment when he asserts "that animal colouring is protective only in the sense that it approximates to its surroundings. This is the so-called mimicry of nature." The black man is a diurnal animal, and, like other diurnal animals exposed to a tropical sun, he has a black skin. Under the pressure of a wet bulb temperature, these animals lose their hair, so that in Central Africa the black man's hair is reduced to woolly tufts, and his dog has a black skin and is hairless. Nocturnal animals, in their daily seclusion, are surrounded by modified sunlight, so that their pigmentation has adjusted itself to the light environment. Colouring for ornament or distinction is only acquired by animals that have lived in an environment of modified sunlight.

Race Seclusion.—The dogma of race purity is a fallacy that seems to have taken almost complete possession of the academic mind, which, if it were only confined within academic circles, might be left unmolested; but when race purity is thrust forward to support the policy of a Government, its advocates not only accept a gross responsibility, but also challenge the intelligence of the community. Under such circumstances they should be willing to accept earnest criticism. The chief impediments put forward by race purists against a rational solution of the race problem may be readily stated. The first impediment is the apparent anomalies arising from the geographical distribution of pigment; race purists found the coloured man walking the earth from the Equator to the Poles—the darkly-pigmented Laplanders and Esquimaux in the Arctic region and the pale-faced Berber in Northern Africa. The fact is, it is only a black man who can walk the earth from the Equator to the Poles in happy disregard of sunlight. Pigment secures the Laplander and Esquimaux from the violence of the Arctic light. The fur of Arctic animals may be described as white, but the portions of the bodies unprotected by hair, as the eyes, nose and mouth, are black. As for the white man, he only takes to the sun for a sunbath; and then in homœopathic doses, for therapeutic purposes. Otherwise, the paleface, whether he is an Englishman, Chinese, Berber or Arab, must keep under cover, or else pigment and burn.

The second impediment is the apparent anomalies arising from the ethnological division of the human race, according to colour. Perhaps the simplest and only scientific way is to divide mankind into black, white and blended or mixed breeds. All anthropologists seem to agree that the primitive man was black. At what stage in his evolution he followed the chase for food and buried himself in forests and by what process he became white need not be discussed here. The sharp contrasts of black and white are familiar enough in the animal kingdom. So black and white can readily be accepted as the elementary divisions of the human race.

The dark-complexioned can be classified as blends. The term not only indicates the modification of colour, but also its origin.

The origin of the blends can be accounted for by miscegenation and segregation, and, further, adaption according to light environment.

There is no evidence that a black man in his journey to the Poles would lose any of his pigment on the way. The American negro's skin is just as black and his hair as woolly as when his ancestors left their tropical home. Nor is there any evidence that a white man, *i.e.*, blond, would develop pigment on exposure to the sun's rays. He burns, but does not form pigment. But there is abundant evidence that, by repeated crossings, various gradations of pigmentation can be obtained, and are to be found among the coloured people of the Southern States of America. That these gradations can again be varied by exposure to modified sunlight is shown in yellow men and Red Indians. While the exposure of the blend to the full pressure of the sun's rays will determine the complete restoration of a black skin, as with the black Berber of North Africa and the black Aryans of Northern India.

The third impediment is the race purists' adversion to mixed marriages. He sees only the vicious and inartistic side of the situation, which is more often the result of environment than of inheritance. He shuts his eyes to the evidence of better conditions to be found among the coloured people of the United States, the Eurasians of India and of the better class of alien mixed marriages in Australia. He fails to see that the hope of the race is in the mixed breeds, and that the history of civilization is the story of race struggle and the results of mixed breeding.

Have race purists ever considered the part the white man, *i.e.*, the blond, has been called upon to play in race evolution. He first appears in history as an enemy of Rome, a scourge and an agent of destruction. To-day, the super-white man of Europe is still a ruthless destroyer, and for what purpose? It is curious that Dr. Merrillees should have chosen the fall of the Roman Empire as an instance of the evils of an alien population. More truly is Roman history an interesting record of race evolution by repeated miscegenation.

The beginning of Rome is said to have been a band of brigands who found refuge in the recesses of the Palatine Hill. We can assume that race purity was not a test of membership. They gathered a competence after the manner of their class, and, desiring to take to religion and respectability, they stole their neighbours' wives, after killing the husbands. Again, without regard to the claims of race purity, after they had consolidated their resources, they began their career of conquest and miscegenation. They gradually extended this control over the neighbouring tribes, till by the days of the Empire the Romans had absorbed the known world. Then the Empire, crushed in by the weight of its alien masses, sank into the darkness of the Middle Ages, during which period human physical readjustment took place. With the re-birth of intellect,

there arose a religion and an art that has made Italy the wonderland of the world. What did the alien white man contribute to the human combine that brought this great revival of art and learning.

Yours, etc.,

M.B. (Melb.).

August 20, 1915.

Medical Appointments.

The following appointments have been made at the Melbourne Hospital:—

Dr. R. P. McMeekin, Acting Medical Superintendent.

Dr. Felix Meyer, Acting Gynæcologist.

Dr. Walter Fisher has been appointed Government Medical Officer at Cessnock, New South Wales.

Dr. F. L. Keith has been appointed Government Medical Officer at Tumbarumbah, New South Wales.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page ix.

Ararat Hospital, Resident Surgeon.
Wilcannia and District, Medical Officer.
Brisbane Hospital, Resident Medical Officers.
Children's Hospital, Perth, Resident Medical Officer.
Black Range District Hospital, Medical Officer.
Lunacy Department, Victoria, Medical Officer.

Books Received.

RELIGIO MEDICI MODERENI, BEING THE BELIEFS AND OPINIONS OF AN OLD MEDICAL MAN, by Neo Kama, M.D., 1915. London: John Bale, Sons & Danielsson, Ltd.; Demy 8vo., pp. 118. Price, 2s. 6d.

TEXT-BOOK OF FORENSIC MEDICINE AND TOXICOLOGY, by Professor Buchanan, M.D., F.R.C.P.; Eighth Edition, revised and enlarged, 1915. Edinburgh: E. & S. Livingstone; Demy 8vo.; illustrated; pp. 417. Price, 5s. net.

THE CLINICAL ANATOMY OF THE GASTRO-INTESTINAL TRACT, by T. Wingate Todd, M.B., Ch.B., F.R.C.S., Manchester, 1915. Longmans, Green & Co. (Sydney George Robertson and Co., Prop., Ltd.). Demi 8vo., pp. 264. Price, 6s. net.

A DIGEST OF THE NEW AND MORE IMPORTANT FEATURES OF THE BRITISH PHARMACOPŒIA, 1914, published together with certain recommendations by the authority of a Conference of Representatives of the Health Department, the Medical Board, the British Medical Association, and the Pharmacy Board of Victoria. Compiled for the Conference by Sidney Plowman, F.R.C.S., and A. R. Bailey, Ph.C., 1915. Melbourne: J. Mullett, Government Printer; pp. 63; Pocket size.

AIDS TO TROPICAL MEDICINE, by Gilbert E. Brooke, M.A., L.R.C.P., D.P.H., F.R.G.S.; Second Edition, 1915. London: Baillière, Tindall & Cox; Demy 8vo.; pp. 230; illustrated. Price, 3s. 6d.

Diary for the Month.

Aug. 31.—N.S.W. Branch, B.M.A., Organization and Science Committee, Medical Politics Committee.
Sept. 1.—West. Suburbs Med. Assoc., N.S.W.
Sept. 1.—Vict. Branch, B.M.A., Monthly.
Sept. 3.—Queensland Branch, B.M.A., Monthly.
Sept. 8.—Cent. South. Med. Assoc. (Queanbeyan), N.S.W.
Sept. 8.—Melb. Pediatric Soc.
Sept. 8.—South Sydney Med. Assoc., N.S.W.
Sept. 9.—Vict. Branch, B.M.A., Council.
Sept. 10.—N.S.W. Branch, B.M.A., Clinical. Last day for nomination of candidates for election of two members of Federal Committee.
Sept. 10.—South Aust. Branch, B.M.A., Council.
Sept. 14.—Tasmanian Branch, B.M.A., Monthly and Council.
Sept. 15.—West. Aust. Branch, B.M.A., General.
Sept. 17.—Queensland Branch, B.M.A., Council.
Sept. 21.—N.S.W. Branch B.M.A., Executive and Finance Committee; Ethics Committee.
Sept. 23.—Return of Ballot Papers for election of two members of Federal Committee.
Sept. 24.—Melb. Hosp. Clinical Soc.
Sept. 24.—N.S.W. Branch, B.M.A., Ordinary. Election of two members of Federal Committee.
Sept. 28.—N.S.W. Organization and Science Committee; Medical Politics Committee.

Covers for binding *The Medical Journal of Australia* for Vol. I., 1915, can be obtained on application to the Manager B.M.A. Building, 30-34 Elizabeth Street, Sydney. The price of a cloth cover is 2s., and of half leather 3s. 6d.; postage, 7d.

Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
QUEENSLAND. (Hon. Sec. B.M.A. Building, Adelaide Street, Brisbane).	Brisbane United F.S. Institute. F.S. Lodges at Longreach.
WESTERN AUSTRALIA. (Hon. Sec. 230 St. George's Terrace, Perth).	Swan District Medical Officer. All Contract Practice Appointments in W.A
NEW SOUTH WALES. (Hon. Sec. 30-34 Elizabeth Street, Sydney).	Australian Natives Association. Balmain United F.S. Dispensary. Burwood District F.S. Institute. Canterbury United F.S. Dispensary. Goulburn F.S. Association. Leichhardt and Petersham Dispensary. M.U. Oddfellows Med. Inst., Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. Mullumbimby District Friendly Societies. N.S.W. Ambulance Association and Transport Brigade. N. Sydney United F.S. People's Prudential Benefit Society. Phœnix Mutual Provident Society. F.S. Lodges at Braidwood. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Mudgee. F.S. Lodges at Orange. F.S. Lodges at Parramatta, Penrith, and Auburn. F.S. Lodges at Wellington. Newcastle Collieries— Killingworth. Seaham Nos. 1 and 2. West Wallsend.
SOUTH AUSTRALIA. (Hon. Sec. 3 North Terrace, Adelaide).	The F.S. Medical Assoc. Incorp., Adelaide.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.

The librarian of the New South Wales Branch has called our attention to the fact that the following issues of the *Lancet* have been borrowed some time ago, and have not yet been returned. The member who has these copies in his possession is respectfully requested to return the same as soon as possible, in order that the volume may be bound: January 2, 9, 16, 23, 30, February 6, 13, 20, April 24, and May 29.

The Librarian of the Victorian Branch will be pleased if any member possessing spare copies of the following journals will present them to the library, in order to complete the sets:—

Lancet, October 3, 1914, April 10, 1915, and subsequent numbers.

Practitioner, September to December, 1914, January and February, 1915.